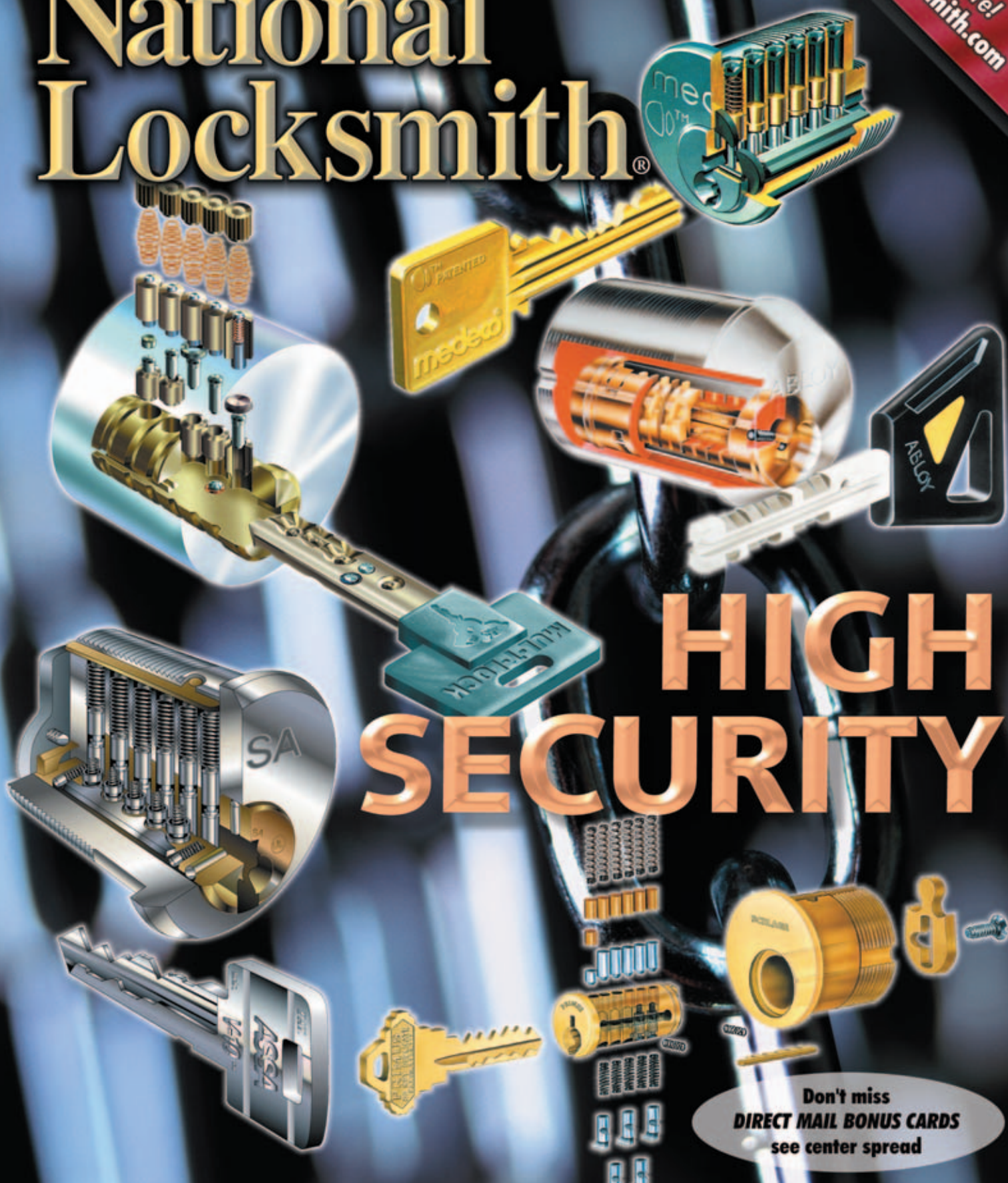


Shop the online store
TheNationalLocksmith.com
• CLICK HERE •

November 2001
Volume 72
No. 11
\$6.00

The National Locksmith®

Shop the online store!
TheNationalLocksmith.com



HIGH SECURITY

Don't miss
DIRECT MAIL BONUS CARDS
see center spread

On The Cover...



Staples in the world of high-security locks and cylinders, ASSA, Abloy, Medeco, Mul-T-Lock and Schlage Primus, offer a wealth of features for the end user.

Publisher Marc Goldberg

Editor Greg Mango

Art Director Jim Darow

Technical Editor Jake Jakubowski

Senior Writers

Sal Dulcamaro CML, Michael Hyde, Dale Libby CMS, Dave McOrmie, Sara Probasco

Contributing Writers John Blankenship, Tony Blass, Joe & Dee Bucha, Carl Cloud, Ron & Chris Curry, Richard Allen Dickey, Steve Gebbia, CML, Giles Kalvelage, Jim Langston, Tom Lynch, Tom Mazzone, Don Shiles, Robert Sieveking

Director of Sales & Marketing

Jeffrey Adair

Advertising Account Manager

Debbie Schertzing

Accounting Manager

Sheila Campo

Production Assistants Dave Krofel
Jenna Del Vigna

Administrative Assistants

Cheryl J. Fiedler
LaVerne Schertzing

Shipping Manager

Allan Galvez

National Publishing Co.

The National Locksmith® ISSN #0364-3719 is published monthly by the National Publishing Co., 1533 Burgundy Parkway, Streamwood, Illinois 60107-1861. Periodicals postage paid at Bartlett, Illinois 60107 and additional mailing offices USPS 040110. Subscriptions \$44.00 per year in the USA; \$55.00 per year in Canada; \$70.00 in all other countries. Single copies \$6.00 each. Postmaster, please send change of address to National Publishing Co., 1533 Burgundy Parkway, Streamwood, Illinois 60107-1861. ©2001 by the National Publishing Company. All rights reserved. Printed in the U.S.A.



BPA International Membership
Applied for August 2001

(630) 837-2044 • Fax: (630) 837-1210

E-Mail: natllock@aol.com

See us on the World-Wide Web:
www.TheNationalLocksmith.com

CONTENTS

The National Locksmith November 2001 • Vol. 72, No. 11

FEATURES

COVER FEATURE! 16

Abloy Disklock Pro

Rotating disk designed cylinders.

COVER FEATURE! 26

High Security Locks And Cylinders

Offering pick resistance, drill resistance, manipulation resistance and key control.

30

1994 BMW 740i, Part 1

Servicing this BMW luxury car.

42

Quick Entry Update

2001 Dodge Stratus Coupe.

44

Hand Operated Code Cutters

A few of the current offerings.

46

LaGard Swingbolt Dual-Handed Swingbolt

A notable change to the Swingbolt lock.

48

The Power Of One

Leland Hanchett retires.

56

LOX-OFF™

Drill the safe and easy way.

76

Agassed Again

Non-deteriorating tear gas.

102

Unlocking The Toyota Highlander

An all cable door lock linkage.

108

Solving COM Port Problems

Steps to follow when troubleshooting a COM port.

111

1999 Suzuki Savage

There are no codes on locks.

125

TheNationalLocksmith.com

Visit us online for technical forums, chat, online store plus visit our sponsors.

DEPARTMENTS

5 COMMENTARY

6 MANGO'S MESSAGE

10 LETTERS

12 SECURITY CAFÉ

52 THE LIGHTER SIDE

70 BEGINNER'S CORNER

94 TECHNITIPS

106 BUSINESS BRIEFS

118 THE CASH STATION

126 TEST DRIVE

COMMENTARY



Locksmiths Who Serve

At our web site, TheNationalLocksmith.com, one of the frequent recurring themes in the Locksmith Forums regards National Service Providers (NSP's). Often, we see participants asking questions about a particular NSP, such as can they be trusted to pay in a timely fashion. Other times, locksmiths are warning their fellow 'smiths that certain NSP's pay very slow, or sometimes not at all.

Not every locksmith will receive a call from an NSP asking you to do work for them. However, if you do, here are a few words of advice to make your job a bit easier. First, ask for a written copy of the payment policies. Most NSP's require paperwork to be completed before payment. You will save yourself a lot of time and effort if you submit your invoices and paperwork in the approved fashion.

Second, ask for a written guarantee of the payment schedule you should expect. In other words, should you expect your money within thirty days, within sixty, or longer. If the average payment time is 45 days, it's better if you know that up front. You can either decline the work in the first place, or adjust your expectations accordingly.

Third, and I think this is a step that most locksmiths skip, I would ask for three locksmith references from the NSP. In other words Mr. NSP, give me the names and phone numbers for at least three locksmiths who will vouch that they have worked for you in the past, and you have paid them in a timely and fair manner.

As I write this Commentary, thousands of military reservists all over the nation are

being activated, whether in the National Guard, Army, Navy, Air Force or Marines. Many are being sent overseas to assist America's counter attack on terrorism.

Personally, I do not have any knowledge of any locksmiths who find themselves in the position of being recalled by the military, but I would be very surprised if there are none. I think we all owe a huge debt of gratitude to all those who have served and are serving now, whether active duty or reserves.

Do you know of any locksmiths who have had to leave their families and businesses behind to serve our country?

If so, please drop me an e mail at NATLLOCK@aol.com so that I can thank these men and women by name. They deserve our mention and our thanks as do all who serve.



Have questions? Want free technical help?
Free Locksmith Forums!
www.TheNationalLocksmith.com

Marc Goldberg
Publisher

Mango's Message

By now we've all heard and seen the horrible images of destruction inflicted upon the World Trade Center's twin towers on September 11, 2001 in New York City. The latest census estimates that over 6,000 people are missing.

I was on my way to the airport to catch a flight to North Carolina when I first learned of this tragedy. When I did, one name immediately came to mind: Seth Pehr, a friend and owner/operator of Daniel Pehr Inc., located at 5 World Trade Center Lobby. Daniel Pehr Inc., is a 54-year old locksmith business, founded and named after Seth's father, which operated from a small office located in the lobby of building 5 in the World Trade Center for the past 26 years. Daniel Pehr has since passed away, leaving the business to be run by his son, Seth; his wife, Francine; and employee Cesar Castro.

I, as all Americans, was deeply moved by this event and couldn't help but wonder if Seth was one of the lucky ones who made it out alive. I am happy to report that he was, and in his words, this is his story.

On September 11th, my day started as it always does. I took the mass transit subway to the World Trade Center. The subway delivers people right under the World Trade Center. I got off and emerged into what is known as the Mall area, and headed towards my store. All of a sudden I see people stampeding from outside, coming into the Trade Center Mall. The Mall is like the hub of a wheel, which connects to six of the World Trade Center buildings. It can be accessed from each tower. To get an idea, about 100,000 people go through the mall area during rush hour.

As I was on my way to my store the first plane hit tower 1, but I was basically unaware of it. When it occurred, I felt a very slight tremor and the lights momentarily flickered off and then back on again. The two towers are so massive and built on granite, that very little was felt on the ground below.

A few seconds after the lights flickered off and on is when people started storming into the mall area.

My first thought was that there is a shooter (someone firing a



Eyewitness to Devastation!

gun) outside, because of the people running in. At first When I saw all the people stampeding, I first ran for cover. As new groups of commuters, who were unaware of anything, stepped off the train and headed outside the buildings, I noticed that as soon as they stepped outside, their heads craned up to look up at the towers.

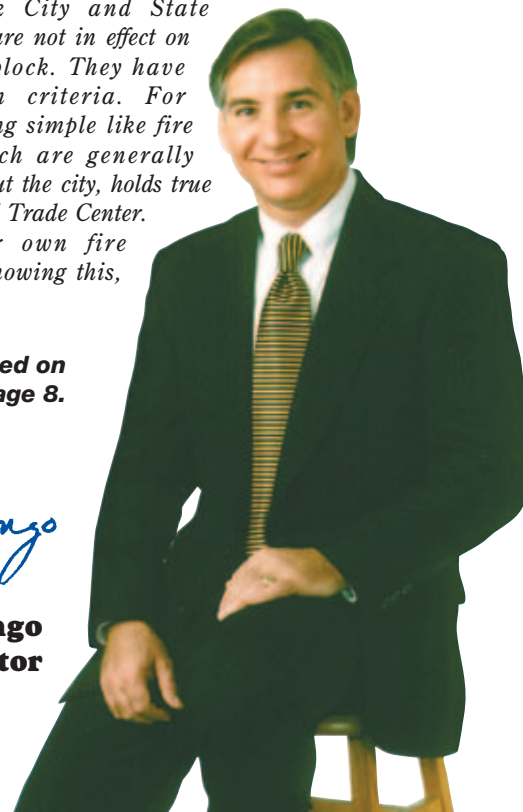
I went outside and was hearing all the eyewitness reports from those who were there. Like everyone else, I looked up and it's hard to conceive that the girth of one tower is wider than the span of a commercial jetliner's wings. As I look, a little smoke is coming out, but it's so high up from ground level, that it doesn't appear to be much. All of a sudden I'm seeing people jumping out of the building. It was then that I wanted to try and help.

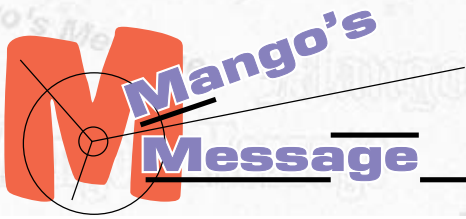
The World Trade Center is a city within a city. New York City has very stringent building, fire and safety codes that apply to everything except the World Trade Center. The World Trade Center complex was created by an act of Congress, and basically, New York City and State mandates are not in effect on that city block. They have their own criteria. For example, something simple like fire return keys, which are generally universal throughout the city, holds true except for the World Trade Center. They have their own fire command keys. Knowing this,

**Continued on
page 8.**

Greg Mango

**Greg Mango
Editor**





Continued from page 6

and knowing the building, I had master keys for the floors and I wanted to assist by giving out keys to help the emergency support services.

I went back into the building corridor and by this time the mall area had been evacuated and was inhabited by just police, fire and rescue personnel. They were the only people in the mall. I was looking for contact people that I knew to assist with the building locksmiths.

A little footnote that just came to mind; there is one building locksmith that is still missing. His name is David Ortiz. He worked with the Port Authority building locksmiths. I believe the Port Authority employs seven locksmiths who worked strictly for the World Trade Center. David is the only one missing. His wife is not taking this well and is still holding out hope.

In my search to find someone to offer assistance, I see a Port Authority administrator that I know by the name of Bob Lynch, with a radio and a flap jacket on. I approach him and as we are talking he abruptly says "Wait!" He listens on his radio and then says to me, "Seth, building number 2 has just been hit." Again we were inside and felt only a slight vibration, but nothing pronounced.

About a minute after the second building was hit we hear another explosion. That was the cables from the elevators being snapped. He then turned towards me and says "Seth, get the heck out of here, the towers are coming down." I ran out of the building and Bob stayed behind to help others evacuate. I am saddened to report that Bob was killed assisting others when the building collapsed.

At this time all modes of public mass transportation were halted, as I walked in a daze to get as far away as I could. At the point where the twin towers are, the island is not very wide. In fact the towers are taller than the island is wide. Had the towers not come straight

down like they did – which was a godsend – there is no telling what the outcome would have been. I just wanted to get as far away as I could. I was about a mile away when I witnessed the unbelievable vision of the towers falling. Even though I witnessed it first hand, I still can't believe what occurred.

My father worked in the area where the World Trade Center buildings were built, and had developed a rapport with some of the construction workers at the site. They were always in need of locks, padlocks, chains, etc., and we would supply materials as needed. I remember one time when I was down there after they had just put up the steel structure. There was no skin, there were no floors. It was just girders. One of the workers said "Hey kid, you want to go up to the top?" This was in 1966. I grabbed on for



dear life and went to the top in a construction elevator. It was in the middle of summer, but it was freezing at the top. What an experience it was to look over Manhattan from a building with no windows and no floors.

As a kid I remember seeing these buildings take shape, as they rose to the heavens. Now as an adult I have seen it topple. Not only the Twin Towers, but my business as well. It was a very sad day.

Besides losing 100% of his business assets, Seth lost 95% of his customers, all of whom were based in the World Trade Center. A Seth Pehr fund has been set up by Jim Caola, of Gem Security Centre in Bristol, England. He can be reached at:

9 Redcatch Rd.
Knowle Bristol, BS42EP England.
E-mail: Gemsecurtiy@net.comuk.co.uk

For those interested, Seth Pehr can be reached at:
94 W. Maple Dr.
New Hyde Park, New York 11040
Phone: (212) 732-3034

As a precautionary note, I would encourage all business owners to have back-up files kept off site. It is something few think about until a disaster strikes. We all (or we all should) back-up our computer files, but what do most do after that? Most keep the back-up files at their office or business location. Should an event such as this occur, what good does the back-up do? Not much! We make a secondary back-up of everything we do at National Publishing on a weekly basis, and keep the copy off site for just such a reason. I encourage you to do the same. Hopefully you will never need it, but if you do, you'll be glad you have it.

As I was in the middle of writing this editorial, which was on October 8, 2001 a day after American military forces initialized attacks on Afghanistan in retaliation for the terrorist attack on the World Trade Center, a thundering sound and huge vibration rumbled our building. It shook the rafters so hard that we all thought the roof would fall. I just about jumped out of my pants and everyone in our office complex ran outside to see if it was an explosion or what the cause was. We soon learned that two F16 fighter jets were in pursuit of a low flying commercial airliner headed towards O'Hare airport in Chicago. In doing so the F16 broke the sound barrier and the concussion of a sonic boom was heard and felt for miles.

Apparently, a passenger rushed the cockpit in a deranged fit. The pilot sent a duress signal, which flagged the F16 escort. Do to the elevated tensions and heightened security alerts these past few months, this experience shook more than just our building. It was, however, reassuring to know that our top gun military bad boys (and girls) are just a throttle thrust away.



NOVEMBER 2001

Letters

The National Locksmith is interested in your view. We do reserve the right to edit for clarity and length.

You Have Our Support

We heard about the horrible terrorist attack on the U.S. with great sorrow. As a citizen of a country, which has suffered from the viciousness of terrorism for more than fifteen years, we can understand your pain and grief very well. I'm confident that a great nation like the U.S. will overcome the results of this cowardly act.

My company and I stand ready to provide any kind of assistance that you might need.

*Ihsan ERGUL, GM
Miftah Otomotiv LTD
Ankara, Turkey*

CD Reference

About a week ago, I printed the index for *The National Locksmith* on CD from your web page. I decided to order the CD's with the intent of using them for reference later on. I just received *The National Locksmith* on CD today and I am very pleased with the product. The fact that Adobe 5.0 was on the disk was also very nice. I only had 4.0 and felt disappointed that I had not found 5.0 already. While waiting for delivery, I

had about a week to reflect and study the index that I had printed from the web page and felt I needed a plan of attack. There was too much information to use just for reference. This was more like a total retainer. So as in "Cool Hand Luke" I knew I had to "Get my mind right." I decided to start from the beginning with *Beginners Corner*.

When I got to March 1996, I ran across an article on page 27 "Security Certificate Tests." I know this is going back a few years. The article said the following: "For a small fee, you may request an individual, personalized Certificate for each test you pass. To request your certificate(s), please fill out and send the form below." Well, the form is now covered by an ad for obvious reasons.

However, I was wondering if you would reconsider reopening some of these older Certification programs? I'm not sure if any more "certification" articles are on the CD's, but this could be a good selling point. I did print out the test and do have plans on taking the tests for my own benefit anyway.

*Jeff Schneider
Schneider Security Services*

Publisher's Note: Jeff, thanks for your comments, and we're glad you're pleased with your purchase. I'm sorry to say that we won't be bringing back the test concept any time soon. However, we do provide more valuable technical information per issue than anyone else in the business does, and we'll continue that! Marc Goldberg

Them Ball Bearings

In the September 2001 issue, under letters, a Mr. Ed Hamm talks about buckshot in cylinders. Russwin-Corbin-Safe Hardware Co.



for years has used ball bearings in their cylinder plugs. Usually the first 3 chambers with master pins on top of the bearing. The reason was less wear and tear on the first group of pins and smoothness of operation.

*John Bouyea
Plattsburgh, NY*

No Way!

This is in response to your September Editorial "Give 'Em The Boot." I am under contract with GM and AAA Roadside. Outside of a few billing problems over the years, I have had very good business relations with them. I bill at my rates and have not had any requests to reduce my payments. My base rate service call is \$45.00, up to 15 miles, day rate. This is based on what other service providers in my area charge (Plumbers, Well Drillers, Furnace Installers, etc.). No way would I travel 20 miles at 11p.m. and service a lock-out for \$20.00!

*Tom Seager
Michigan*

The National Locksmith
1533 Burgundy Parkway
Streamwood, IL 60107
Attn: Editor

Security Café

**DROP IN FOR
TOOLS, TECHNOLOGY
& EQUIPMENT**

Kaba Ilco Small Format I-Core

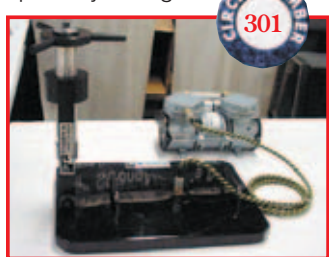
Kaba Ilco has expanded its replacement cylinder line to include Small Format Interchangeable Cores in both precision cast and machined brass. Both styles have solid brass plugs and are available in 13 keyways and two finishes (04 & 26D). They are repinable into Arrow, Best, Falcon and KSP master key systems. The brass cores feature conventional style pinning with individual chamber caps. The precision cast cores provide easy pinning with a slide cover strip staked as the pin and spring retainer.



StrongArm VacPack

The VacPack available from StrongArm, Inc., attaches the MiniRig to vault doors and safes with vacuum power. It offers fast and secure mounting for drilling the top or side of a safe, stainless clad vault doors, remote relockers, etc.

The VacPack includes a specially designed



vacuum base and a small, powerful 115v vacuum pump and hose. Designed and manufactured like the MiniRig, the pad and pump are lightweight, compact and provides maximum holding power and fast set-up.

The VacPack and MiniTig is the most easy to use and versatile drilling system ever.

Major Manufacturing HIT-108

Major Manufacturing is pleased to announce the release of the HIT-108, one of four brand-new templates that you will find helpful and necessary tools to have at your disposal. The HIT-108 drill guide takes out all the guesswork when installing an EE1000 Unican. Each HIT-108 unit comes equipped with hardened drill bushings on both front and back plates to allow drilling from



either side of the door. The template is able to accommodate doors up to 2" thick and thru-bolts to the door by utilizing the existing 2-1/8" cross bore for alignment.

Trine Digital Receiver and Transmitter

Trine Access Technology has released the latest version of their popular wireless remote transmitter and receiver models. The 017DC receiver now boasts a dry "C" (1-amp) relay, along

Medeco KeyMark for Corbin Russwin

Locksmiths and other security professionals are now able to upgrade Corbin Russwin locks to Medeco quality and security with the KeyMark Interchangeable Core cylinder. The interchangeable core cylinder is a simple, cost-effective cylinder replacement now available to fit most Corbin Russwin Hardware.

The KeyMark Interchangeable Core offers greater protection with a utility patent on the cylinder and key. The key cutting device and vice jaw are also patented for additional key control.

The KeyMark Interchangeable core system offers homeowners and businesses the opportunity to purchase better security without totally replacing their current lock system.



with its unique 2-30 sec. time delay for additional applications. Battery and self-powered locks can be activated remotely, eliminating the extensive work associated with long wire runs. The 150' operating range of the mini-transmitter and the fact that it will operate on a 12-24 AC/DC, NO/NC relay, with a maximum 3 amp current draw, makes this system a valuable, time saving tool for professionals who install electrified hardware.

STI Stainless Steel Protector

Safety Technology International has developed a

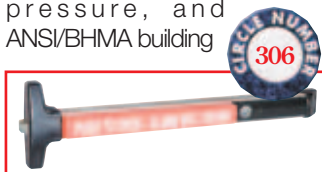
heavy-duty, 16-gauge, stainless steel protective cover for smoke detectors. It is designed for food processing plants, commercial kitchens and restaurants. This is the first stainless steel product in the extensive STI Stopper Line of more than 60 devices to help stop false fire alarms, vandalism, accidental damage and theft of security/fire protection units. Backed by a lifetime warranty, the cover measures 3" deep, 7.875" wide and 2.75" in width at the point. With available 2" conduit spacers, it will fit virtually all smoke detectors available today. It will also be available in several colors.



SECURITY CAFÉ

Detex Value Series Rim Exit Devices

All models in the Value Series are UL listed and carry a Grade 1 rating. Additionally, each model is fully code compliant and exceeds life safety, ADA, CA Title 19, UBC-97 positive pressure, and ANSI/BHMA building



requirements. Three-hour fire rated models are available.

Alarmed models include the V40 x EB and the V40 x EH. The V40 x EB model operates with a 9V battery, while the EH model works with 12V AC. Both models include a 100-decibel alarm, which can be armed or disarmed using a standard 5, 6 or 7 pin Yale-cam mortise cylinder. Both models carry a 3-year manufacturers limited warranty on mechanical parts

and a 1-year warranty on electronic parts. Electronic switching (ES) and electronic integration (EI) models options are to be introduced within the next few months.

LaGard's eCam Electronic Locking Solutions

The eCam allows LaGard to offer a product that is specifically designed to fit market segments, such as, pistol boxes, gun cabinets,



drug cabinets, hospital lockers, key cabinets, tool cabinets, car and RV safes and non-UL home safes.

The eCam features an extremely low-profile design that does not protrude beyond the handle of a safe or cabinet. External emergency power terminals were designed into the lock along with two, 6-digit changeable codes.

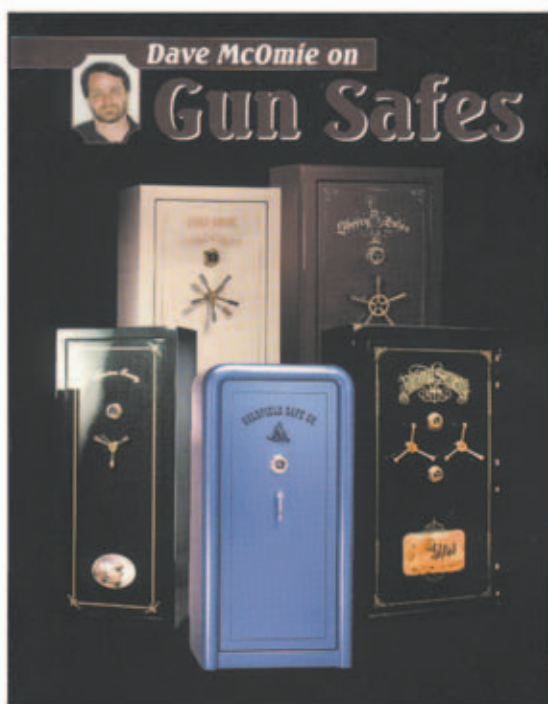
Additionally, vertical and horizontal 10-digit keypad styles will be available for different mounting requirements. An LED for keypad illumination will have no sound output, giving gun owners an important viable locking solution.

The eCam includes a low battery warning, various LED signals and a wrong try penalty. The lock will retail for a suggested price of \$70 and will be in full production by the fourth quarter of 2001.

SDC 6 Amp Access Control Power Supply

The new SDC 636RF modular power supply is specifically designed for use with access controls and

Gun Safes



Need a drill point or relocker drill point
on a gun safe?

[CLICK HERE TO LEARN MORE](#)



#GS - 1



electric locking hardware. The 16-gauge 16" x 14" x 6.5" enclosure is large enough to accommodate up to eight door control modules and six 7-amp hour batteries. Features include field selectable 12/24V DC, one 6 amp output or three 2 amp Class 2 outputs, fire emergency release input, battery charger, low battery disconnect system status indicators and up to 24 optional fuse or PTC protected Class 2 outputs.

While the 500 mA isolated battery-charging output is regulated at 13.5V or 27V, the secondary access control and lock output is precisely maintained at 12 or 24V DC. The 6 Amp output is not de-

rated when charging batteries. The optional microprocessor based Access Hardware Controllers provides up to 8 field programmable outputs, with two relay functions per station, such as, relay, latching relay, timer relay or choice of two different 2 to 6 door mantrap systems. UL Listed, Access Control Systems Unit and General Purpose Power Supply.

Slide Lock Tools Z-Tool System

The Z-Tool car opening kit keeps it simple and requires no special training. All 1000 plus models are in the one manual, and is now



in it's 13th edition. Why use 40 plus tools, when we still open all models using only 10 very thin, very strong tools, made from stainless steel.

Marks USA Grade 1 Tubular Deadlatch

Marks USA has developed an ANSI Grade 1, tubular deadlatch. We have modified its Grade 1 tubular deadbolt components to accommodate a new, heavy-duty, Grade 1 tubular latch bolt. The latch bolt features a stainless steel deadlocking latch nose, with a 9/16" latch throw. The result is an easy to install tubular deadlatch, which is available in both conventional and IC core cylinder models.



Falcon Z Series Lock

The new Falcon Z Series lock is designed to save both time and money while it delivers dependable performance. This new Grade 2 cylindrical lock is positioned mid-range between Falcon's B Series cylindrical Grade 2 lockset and the F Series tubular Grade 2 lockset, with fewer options than the Falcon B Series, and more robust than the F Series. As with all Falcon Grade 2 products, the new Z Series meets or exceeds all current ANSI 156.2 Grade 2 Standards.

The Z Series has a patented torque stabilizing design that makes installation faster and easier. Its



High Security Safes Volumes 1 & 2



Learn to open
High Security
Safes now!

CLICK HERE TO LEARN MORE



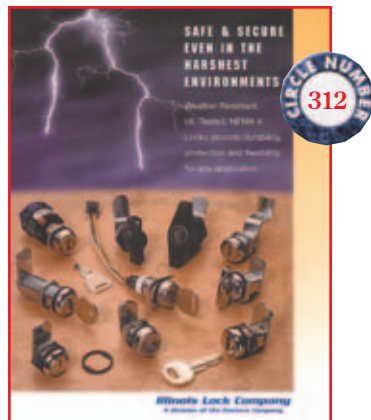
SECURITY CAFÉ

removable stud ring gives installers the option to use through bolting or not, and they can quickly adjust for increased or decreased door thickness with just a spin of the rose. Typical applications for the new Z Series include both interior and exterior doors in offices, hotels and motels, hospitals, health care facilities, restaurants and shopping centers.

Illinois Lock Product Guide

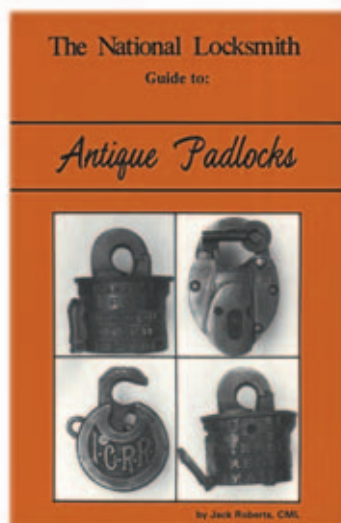
Illinois Lock Company has a new Product Guide that is packed with valuable information on selecting locks for harsh environments. The Guide introduces the new line of Weather Resistant Locks and provides application information, technical specifications and engineering drawings, to ease the process of specifying exactly the right lock for the application.

The featured weather resistant locks are NEMA-4 rated and UL tested to resist



moisture, dust, salt and extreme temperatures. Choose from switch locks, cam locks, knob locks, high-security DUO mechanism locks and more, in a multitude of sizes and configurations. Select stainless steel or chrome-plated nickel construction, all with internal O-rings. In addition to the twenty-five featured locks, over 200 unique weather-resistant lock configurations are also available. **TRL**

Antique Padlocks



Finally there is a book to give you all the information you need about old interesting locks.

[CLICK HERE TO LEARN MORE](#)

#PAD - 1



The Ultimate Technitips Collection



Here's one of the most useful books ever available to the locksmith!

[CLICK HERE TO LEARN MORE](#)



#TIPS - 2

ABLOY Disklock Pro

by Sal Dulcamaro, CML

I can't remember when I first saw an Abloy lock, but I'm pretty sure it was at least 20 years ago and the lock was a padlock. Originating in Finland, Abloy locks and keys are rather unusual when compared to pin tumbler locks and their keys. Abloy locks have tumblers, but they operate on a completely different principle than the pin tumbler locks more typically found in the American market. In Abloy locks, the tumblers are mostly flat and roundish and rotate independently of each other. These rotating discs don't particularly look or operate like the discs (or wafers) of a more typical disc tumbler lock.

The Abloy operating principle is similar to that of a dial type (mechanical) safe combination lock. The rotating disc tumblers, like the wheels of a mechanical combination lock, have slots or gates that all must be aligned in a specific position before it can be unlocked. A locking bar (like a fence) must drop in the aligned gates to complete the unlocking process.

Like most padlocks, an Abloy padlock only requires its keys to unlock. Snapping the shackle closed typically accomplishes locking. As such, key operation and tumbler engagement only need to be done in one direction. Keys for the early Abloy padlocks I saw were fairly small with a "D" shaped key blade profile. The key cuts were not measured by depth, but by angle. The actual path of the key cuts are 90 degrees to the path of the key blade, but follow a radial path in a circular motion around the key blade. The original keys only had cuts that allowed directional operation in one direction. That concept was fine for padlocks, but an equivalent concept lock cylinder for other types of security hardware (in the American market) would require bi-directional operation.

Abloy Disklock Adapts to American Lock Hardware

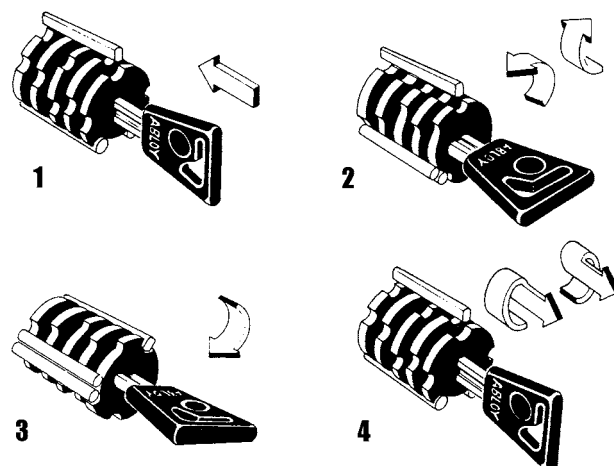
Expanding beyond the unidirectional operation of padlocks, Abloy introduced a product they called "Disklock" to create mortise lock cylinders and other types of lock cylinders which required bi-directional operation. *Illustration A*, demonstrates the steps of its mechanical operation. The main principles are the same as the original Abloy, except that it has bi-directional capability.

Step #1 shows an arrow indicating the insertion of the key into the keyway. The actual locks have more than the five discs illustrated, but the five shown are enough to illustrate operating principles. Notice that the gates are not all aligned. They will be scrambled before key rotation finally aligns them.

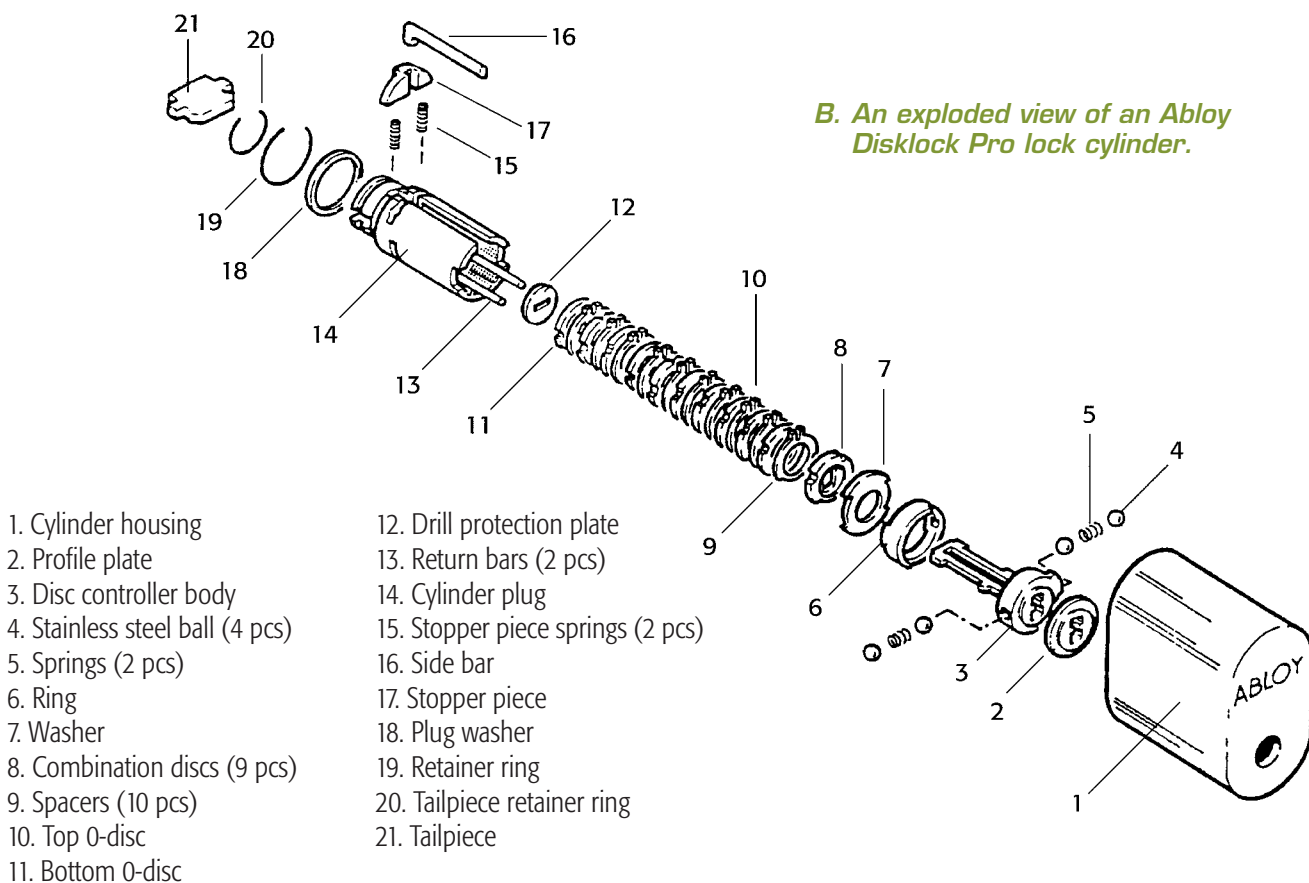


The Abloy Disklock keys had the cut angles reproduced in both directions. Step #2 shows rotational arrows pointing in both directions. For this step you could turn the key in either direction to effectively accomplish the same thing. There are no tumbler springs, so the tumblers do not move until engaged by the angled cuts in the paths of their tumbler positions. When the key is rotated, different tumblers will engage the key at different times. As each tumbler is picked up, it starts to rotate along with tumblers that were already moving.

What follows here will depend on whether or not you are using a properly cut key (for the particular lock in question) or a wrong key. If it is a correct operating key, all the gates will create a straight line after all the tumblers are in motion. The graphic in step #2 shows that straight line directly under the locking bar. Depending on the tumbler arrangement, that straight line should exist slightly before reaching the locking bar. At the end of that rotary motion (about a quarter turn) the tumblers will stop moving independently within the Abloy plug. The Abloy plug is more like a sleeve or hollow tube than the solid plug (with drilled holes) you might find in a pin tumbler lock cylinder. If the correct key is used, the locking bar (sidebar) will be just above that straight line of tumbler gates. Further attempts at key rotation will force the sidebar into the gates so that it is even with the top surface of the plug. When the sidebar is contained within the plug, the plug will be able to rotate and actuate the lock mechanism. That is illustrated in step #3, except that a drawn outline of the plug surface is not shown.



A. The mechanical operation of an Abloy cylinder.



The inside tumbler surfaces become directly engaged with the angled cuts of the key. Even if nothing else was interfering with the key, the key could not be withdrawn from the lock until the tumblers were rotated back in the opposite direction to disengage the cuts. That operation is illustrated in step #4. Unlocking and reversing the key rotation for key removal are mirror image operations. Unlocking to the right would require key release to the left. Likewise, when you unlock to the left, you would release the key by turning it to the right.

If you used a wrongly cut key, step #1 would be unchanged. Step #2 would be partially the same, but the lock would not unlock. If the key cut angles are wrong, the gates will rotate to different spots and will not form a straight line.

You may be thinking that it could only do that when using a wrong key for that particular lock, but you would be

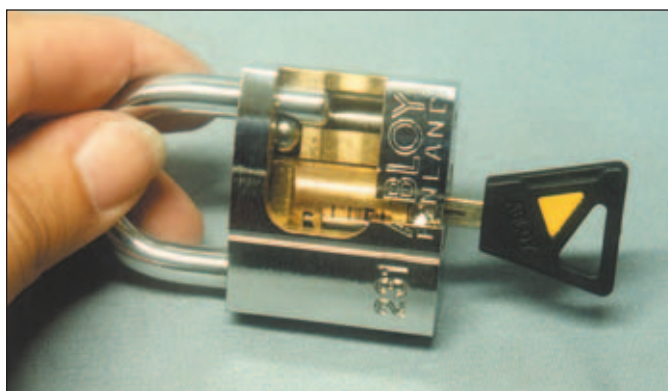
mistaken. If the properly cut key is not fully inserted into the keyway, angled cut positions will align with tumblers other than intended.

Abloy Introduces Disklock Pro

Since it was possible to insert a key only part way, you could use a proper key but have it act like a wrong key. The only way the correct key would properly operate, a lock was for the key to be fully inserted before you started to rotate the key. This possibility existed for both original Abloy (unidirectional) and Abloy Disklock (bi-directional). To correct that problem, Abloy made modifications to Disklock.

Illustration B, shows an exploded view of an Abloy Disklock Pro lock cylinder. Abloy Disklock and Disklock Pro are virtually identical except for the parts identified as parts numbered 3, 4 and 5. In conjunction with a dimple cut in the key blade, a Disklock Pro key could not begin to turn until the key was fully inserted. The stainless steel locking balls protrude into the lock housing when any part of the key blade (except for the dimple cut area) line up with the balls. What that does is prevent key rotation until the key is fully inserted. If a key fails to operate the lock, you can guess that you are not using the right key, not that you haven't pushed it in far enough. Obviously a malfunctioning lock or damaged key would be the exception.

Photograph 1, shows a cutaway Abloy padlock that reveals the lock cylinder and other internal parts. This padlock features a Disklock Pro style lock cylinder and keys. As a padlock, it only turns one direction to unlock. It doesn't need to be bi-directional, but it does have keying compatibility. In the photograph the key has just been inserted.



1. An Abloy padlock.

In *photograph 2*, the key has been rotated about a quarter turn. Being a correct key, it means that all the gates are aligned and under the sidebar. So far the plug has not yet moved. Only the key has turned and the tumblers have rotated within the plug.

Continued rotation in *photograph 3* means that the sidebar has entered the gates of the tumblers and the plug has started to turn. *Photograph 4*, from the opposite side of the padlock, shows the sidebar exposed and contained within the tumbler gates.

Rotating Disc Tumblers

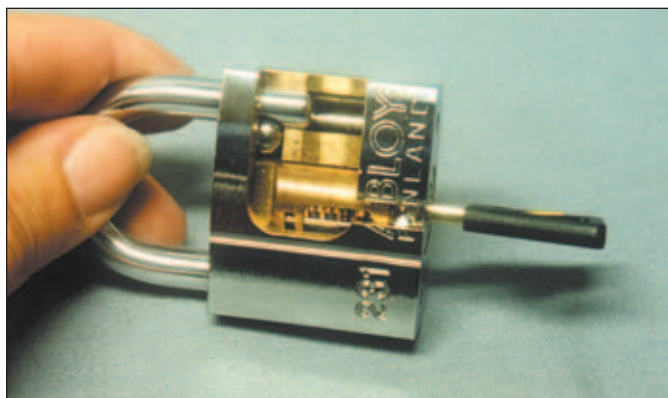
Photograph 5, shows a tumbler kit for the Abloy Disklock Pro lock cylinders. A kit with parts other than tumblers is shown in *photograph 6*. There are seven different combination disc variations. They correspond with the seven different key

cut angles on the Abloy key. *Illustration C*, shows what they look like. These are not master discs even though all but one have two gates. There are two gates to allow unlocking in either direction. The number 6 disc has only one gate because that same spot lines up under the sidebar from the start. The number 6 cut is so deep that it doesn't rotate the disc.

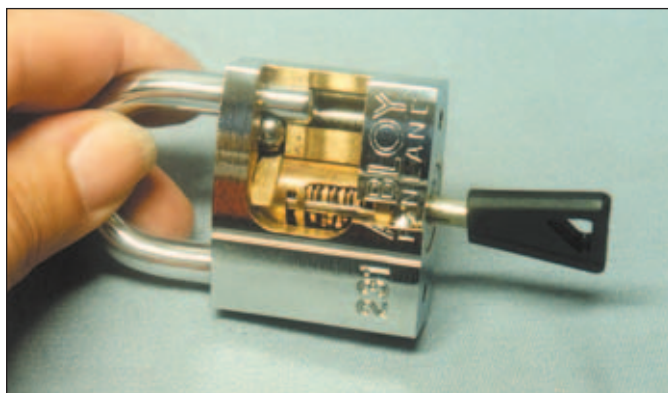
Much like the wheels on a safe combination lock, there are spacers in between each tumbler so that friction does not drive the motion of the tumblers. Also like many safe locks, there are (shallow) false gates to help deter manipulation.

Key Cuts

Illustration D, illustrates how an Abloy key is cut. Except for a keyway groove, the basic Abloy key is approximately rectangular (with rounded corners) in shape. Abloy keys cannot be cut on standard key machines.



2. The gates are aligned and under the sidebar.



3. The sidebar has entered the gates.



4. The sidebar exposed and contained within the tumbler gates.



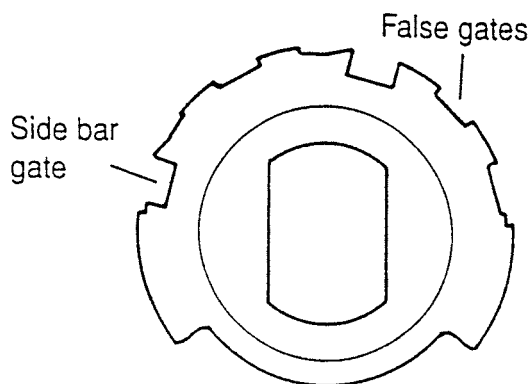
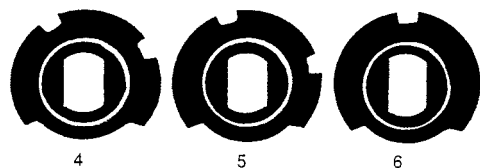
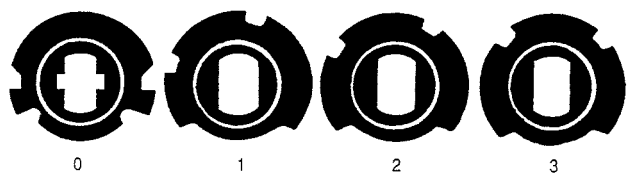
5. A tumbler kit for the Abloy Disklock Pro.



6. A kit with parts other than tumblers.

Continued on page 22

Continued from page 18



C. The seven different key cut angles.

Illustration E, shows how a cut Abloy key can be read. There are a total of seven cut angles represented. They are numbered from zero to six. The picture shows how the cut numbers can be visually identified.

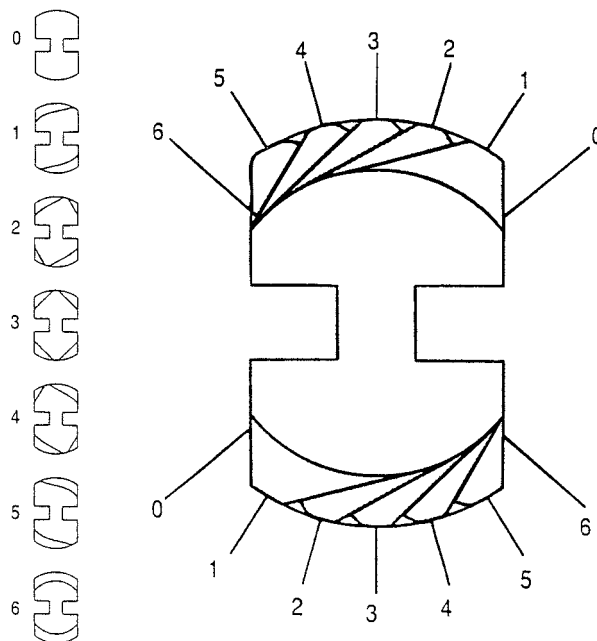
The Abloy Product Line

The Abloy product line is extensive. Continuing first with padlocks, *photograph 7* shows a variety of Abloy heavy duty padlocks. Some even larger padlocks are shown in *photograph 8* (along with the cutaway padlock). A few of the padlocks have "O" rings and are so labeled. I presume they have "O" rings to seal out water. None of the Abloy padlocks I saw had springs of any sort. There were neither tumbler springs nor shackle springs. Where many padlocks have shackles that pop out when unlocked (because of shackle springs) Abloy padlocks do not. When unlocked, you must pull out the shackle.

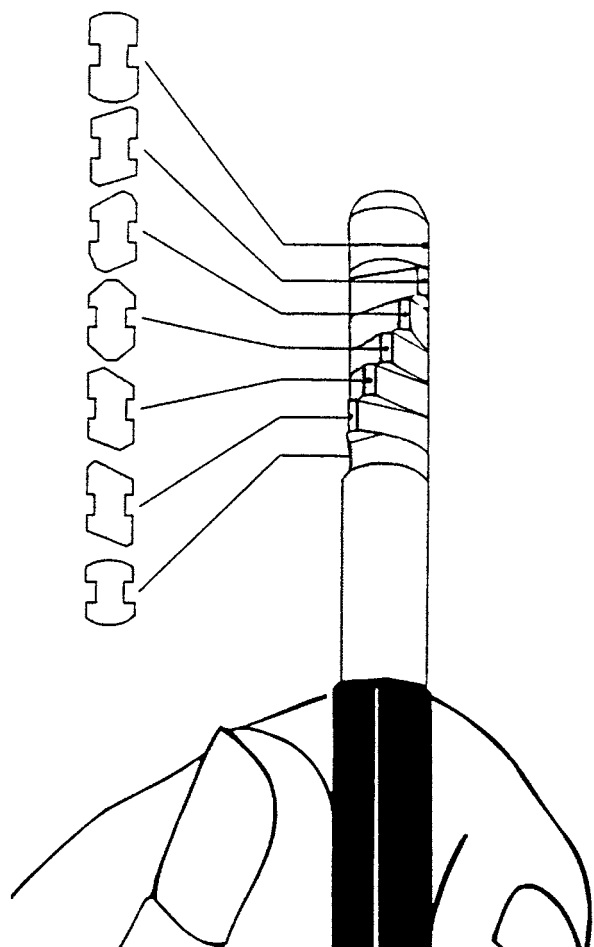
Photograph 9, shows a clear view padlock sample that shows the internal construction of a typical Abloy padlock. You can see the tail end of the plug that forces out the locking balls into the cutouts of the shackle to resist shackle pulling. When the plug is turned, recesses in the back of the plug allow the locking balls to move inward to release the shackle.

Deadbolt Locks

Abloy makes a number of different deadbolt locks that vary in finish and design. From left to right in *photograph 10*, the finishes are brushed chrome, bright brass and bright chrome. In front of them is a heavy-duty strike box. All the Abloy deadbolts are solid and substantial. You wouldn't want to drop one on your foot. *Photograph 11*, shows a rear view of the same locks. On the left is a single cylinder deadbolt lock. In the middle is a modified single cylinder deadbolt lock with a locking thumb-turn. It kind of turns it into a



D. Abloy keys cannot be cut on standard key machines.



E. There are a total of seven cut angles numbered from zero to six.

Continued on page 24

Continued from page 22



7. A variety of Abloy heavy duty padlocks.



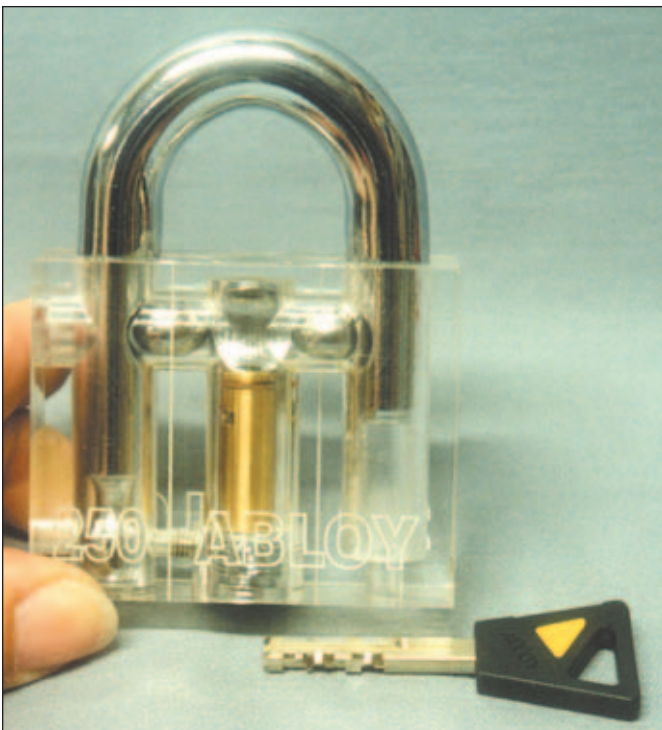
10. Brushed chrome, bright brass and bright chrome finishes.



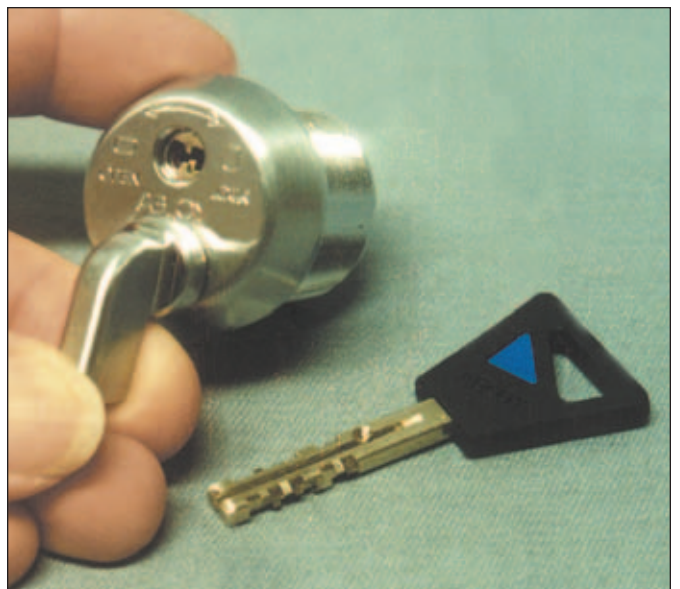
11. A single cylinder deadbolt and a single cylinder deadbolt lock with a locking thumb-turn.



12. Abloy mortise cylinders.



9. A clear view padlock sample.



13. The thumb-turn is in the unlocked mode.

combination (or convertible) single/double cylinder deadbolt lock. On the right is a double cylinder deadbolt.

Other Lock Cylinders

Photograph 12, shows two mortise cylinders. You should be able to adapt most brands of mortise locksets to Abloy high security with these mortise cylinders available in a variety of finishes. The bright chrome cylinder on the left has an interesting keyhole cover that should deter dirt and other elements from entering the keyway.

Abloy has recently introduced a very interesting lockable mortise thumb-turn. Shown in *photograph 13*, the thumb-turn is in the unlocked mode, which means that the thumb-turn will turn and operate the lock. *Photograph 14*, shows the thumb-turn locked. A visual guide on the face of the thumb-turn cylinder shows that when the keyway is side to side, the thumb-turn is open. When the keyway is up and down, it is locked. As small as it seems, it can be keyed to match any other Abloy cylinder.



14. The thumb-turn locked.



15. Knob style cylinders at the left and rim cylinders on the right.



16. Cam, desk, switch and profile cylinder samples.

Photograph 15, shows knob style cylinders at the left and rim cylinders on the right. You should be able to convert most brands of key-in-knob and key-in-lever locks to Abloy high security by installing an Abloy cylinder in replacement of the original cylinder. Both the knob style and rim type cylinders can sometimes be used in certain rekeyable padlocks and other auxiliary locks.

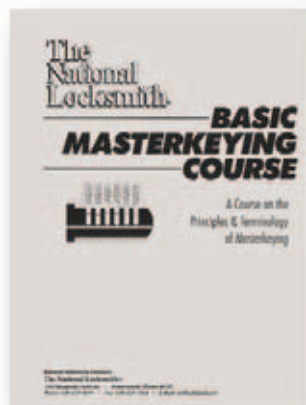
The compact design of the Abloy lock mechanism allows it to fit into very small lock packages. *Photograph 16*, shows a small sampling of cam, desk, switch and profile cylinder style Abloy locks. Few high security locks have full compatibility between locks of such a size differential. With no limitation on what cut angle can be adjacent to another cut angle, there is no difference in theoretical and actual biting combinations. Abloy has master keying capabilities of staggering proportions, and can be accomplished between locks in the full Abloy product lineup.

Abloy locks are impressive, but you should have a thorough understanding of them before casually tinkering with them. There are some important dos and don'ts to heed before just willy nilly disassembling an Abloy lock cylinder. They are easy to jam up if you are careless.

The current North American headquarters is located in Canada. If you want more information on Abloy and Abloy products, contact: Abloy Door Security, 9500 Trans Canada, Montreal, Quebec, H4S 1R7. Phone: 514/335-9500. Toll Free: 800/465-5761. Website: www.abloy.com.

I also have a presence online. Please check out my web page at: <http://home.earthlink.net/~lockwriter>. Click on my link at "Tech Article Addendum". **TNL**

Basic Masterkeying Course



The Basic Masterkeying course is designed for the locksmith who wishes to become proficient in Basic Masterkeying.

CLICK HERE TO LEARN MORE

#MK - 1



High Security Locks and Cylinders

Offering pick resistance, drill resistance, manipulation resistance and key control, high security locks greatly increase the level of security and system control in any residential, commercial or institutional setting.

ASSA



With a variety of products, ASSA offers maximum security for public, institutional, residential, and government buildings. Their cylinders are UL 437 listed and provide protection against all forms of physical attack. In addition, they provide more security with geographic assignment of exclusive keyways and patented keys that prevent unauthorized duplication.

ASSA locks can be master keyed to generate new systems or expand an existing system. For your convenience, you can secure all cabinetry, windows and doors within your establishment with a single master key.

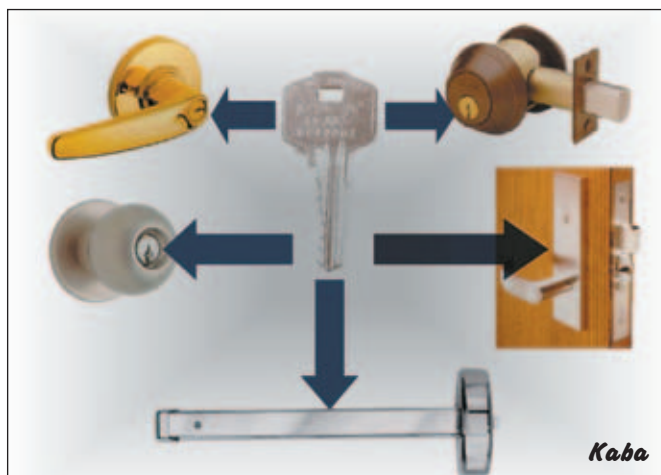
ASSA quality products are always well designed, making us the leading manufacturer of high security locks. The cylinders are made of high quality brass which stands up to the heaviest use imaginable. The keys are manufactured from quality nickel silver material offering durability against breakage.

Make ASSA your first choice for security and they'll meet all of your needs with the variety of quality products.

Kaba High Security Locks, Inc.

Kaba High Security Locks, Inc. is part of the world wide Kaba Group which now includes all of the wonderful products offered by the newly purchased Ilco Unican Group. All Kaba Peaks, Kaba Gemini and Kaba L10 high security cylinders are manufactured in the Southington, Connecticut location. This plant supplies high security products to all of the Americas.

Kaba cylinders retrofit most grade 1 and grade 2 locksets in the industry. This makes these cylinder systems extremely flexible from the standpoint of putting many different types of hardware into one key system.



The Kaba support system has a professional to assist you through every phase of your project. The sales force is more than willing to help you through the bid process. Customers have depended on us for years to supply them with large complex master key system biting lists free of charge. Call the Technical Training department if you are not quite sure how to retrofit that old and rare piece of hardware.

Remember that patented key control systems keep the customer coming to you for keys. When they come in for keys don't forget to furnish the rest of their hardware needs. Kaba High Security cylinders can help you make it happen.

Medeco Offers Total System Solutions



Medeco provides support materials to assist locksmiths as they also make the transition from simply selling keys and locks to professionally selling solutions for their customer's needs.

Technical Training and Customer Service
Support includes factory certification classes, consulting, system planning, and design. Medeco has also developed a new software program, KeyWizard, to help automate important key

Continued on page 28

Continued from page 26

tracking processes and help locksmiths add to their value to their end user customers, by easily providing audit and tracking information.

Sales and Marketing Support

Medeco provides professional, effective brochures and sales materials to complete the sales package. Most recently, Medeco launched a new, consumer-oriented web site that educates potential customers on security needs and also provides a dealer locator tool that can direct those potential leads to recommended dealers.

Business Development Tools

In 2001 Medeco introduced its improved business development program, the *Medeco Business Advantage (MBA)*. The MBA program includes books, seminars and other materials to specifically support locksmiths. Through the MBA, a locksmith can learn basic business skills, that educate in areas like identifying target customers to creating effective sales presentations.

MUL-T-LOCK Hercular



MUL-T-LOCK has launched a new era in Deadbolt Locking. The new MUL-T-LOCK Hercular Deadbolt was designed to provide the consumer with superior protection. It is UL Listed for burglary, and fire, as well as ANSI Grade 1 approved. Like its predecessor, this deadbolt is fitted with an advanced steel ball bearing mechanism to prevent jimmying by interlocking to the frame. The cylinder, like all MUL-T-LOCK cylinders, is designed to resist picking and tampering due to MUL-T-LOCK's telescopic pin design (pin-within-pin). MUL-T-LOCK's Patented Interactive Key Control System also protects the Hercular, which to this day is one of the longest key blank patents available in the market.

MUL-T-LOCK also focused on aesthetics with the Hercular, by offering a lifetime anti-tarnish finish standard on this new product, and like all MUL-T-LOCK products is protected by a lifetime mechanical warranty.

The first of its kind to have an ANSI Grade 1 adjustable backset (2 3/8" to 2 3/4"), the Hercular is sure to minimize inventory for all MUL-T-LOCK Dealers. This combined with a removable faceplate, which allows conversion from standard to drive-in configuration, gives the technician the flexibility of having 4 deadbolts in one package. Another time saving feature of the Hercular is a spring-loaded tailpiece, which will minimize installation time by not having to do trimming to accommodate different door thickness. All of these adaptations can be done by almost any technician in a short amount of time.

It is hard to believe that all of this is available in one package. All in all the MUL-T-LOCK Hercular has set new mark for which all others will be measured by.

Schlage Primus High Security Cylinder



Schlage introduced its Primus high security cylinder in 1989. Most locksmiths are familiar with the mechanics of the cylinder so let's talk a little about support, including the current launch of Everest Primus which allow Primus dealers to offer patent protection well into the year 2014.

There are several categories of support, which Schlage provides to the marketplace.

Sales Aids

A large variety of wood mounts are available for counter top displays of Schlage hardware. You can also purchase a cylinder demo kit with a cutaway cylinder to show the Primus mechanism and cylinders. This is to demonstrate how to save money by combining conventional Schlage cylinders and Primus high security cylinders in the same key system.

How do I do it? Where can I get it?

Customer Service can guide end users to the nearest Primus locksmith and explain what procedures are necessary to obtain duplicate keys. From the numbers on most Primus keys, they can also determine who the originating dealer was, and refer callers to that company.

The Primus Administration is a department attached to Customer Service which polices Everest restricted keyway and Primus orders for proper authorization to be sure no product ships without proper authorization. These people also maintain the database of Primus locksmiths and end users.

A Sensible Product Offering

Schlage provides a variety of competitor retrofit cams for mortise cylinders as well as a line of retrofit cylinders for Corbin Russwin, Sargent, and Yale key-in-knob and key-in-lever locksets.

To stay up with the times, Schlage is now introducing three new key control levels of Primus cylinders. Levels 7, 8, and 9 incorporate the new Everest keyways which will provide solid, enforceable key control well into the year 2014.

Part One

1994



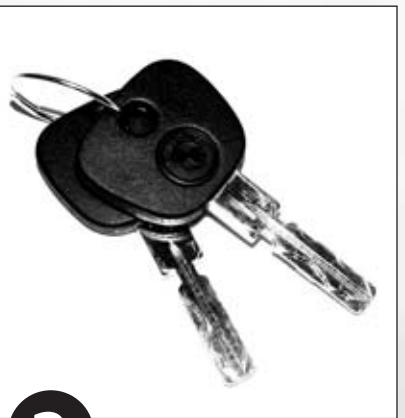
740i

by Michael Hyde



1

The BMW 740i is the top of the line in luxury for the BMW product line. This car uses a 4-track high-security keyway and requires special equipment to originate or duplicate keys. This car also has a special door locking control device, where once the door is locked by key or remote control it can be deadlocked. Deadlocking is a special device built into the door locking motor that physically stops the motor from unlocking. It is possible to still unlock the vehicle, but in most instances this will cause damage to the door lock components. An alternative is to pick the trunk lock and then decode it to progress a working door key. Another alternative would be to have the customer get the key code from any BMW dealer and then code out a key, since the codes are available.



2

This is the BMW master key and valet key. The valet key has no center groove running down the blade, thus preventing it from entering the trunk lock and glove box lock.



3

ASP makes the keying kit for this car. The part number is: A-13-103.





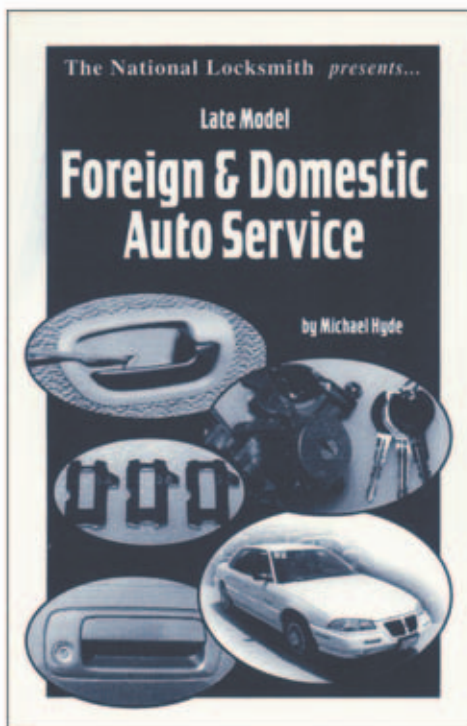
4 This BMW has a 4-Track high security ignition lock and did not start using a transponder system until January 1995.



5 To remove this ignition with a working key, rotate the lock cylinder to the "ON" position.



6 Once the ignition is in the "ON" position, insert a wire probe to depress the active retainer.



Foreign & Domestic Auto Service

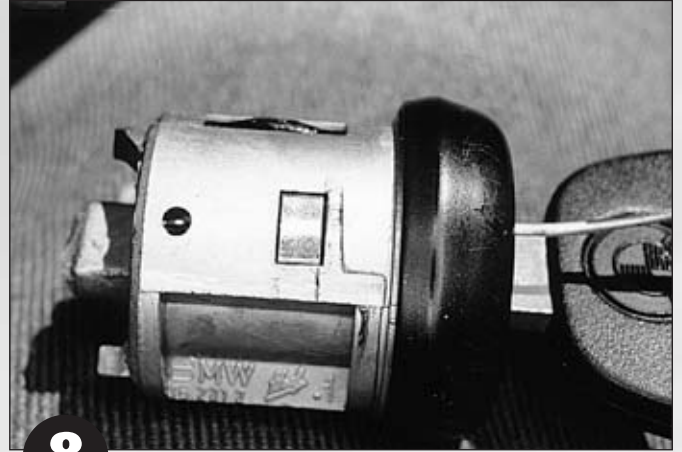
This book represents the best work of Automotive Locksmithing guru Michael Hyde, author of the famous AutoSmart.

[CLICK HERE TO LEARN MORE](#)





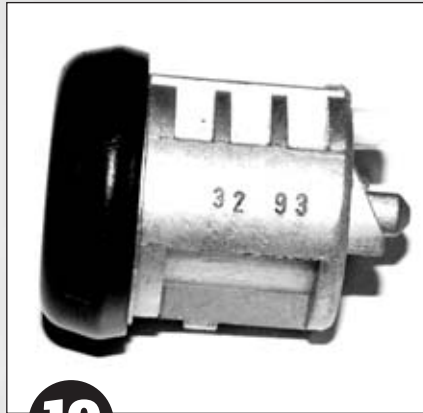
7 It may be necessary to put a point on the wire probe to make it easier when depressing the active retainer.



8 A close-up view of the active retainer and the wire probe being inserted through the face of the ignition lock.



9 The ignition lock looks like it can not be disassembled, but it can. It is actually a very simple lock to work on.



10 There are numbers stamped into the lock cylinder housing, but it is not a code number.



11 Use a Dremel tool with a fiber disc cutter to slice a small slot into the black hardened steel cap.



12 Use a small flat bladed screwdriver to push in on the retainer ring and rotate the cap as you do this to walk off the cap.



13 A view of the hardened cap and retainer ring removed.

Continued on page 34

Continued from page 32



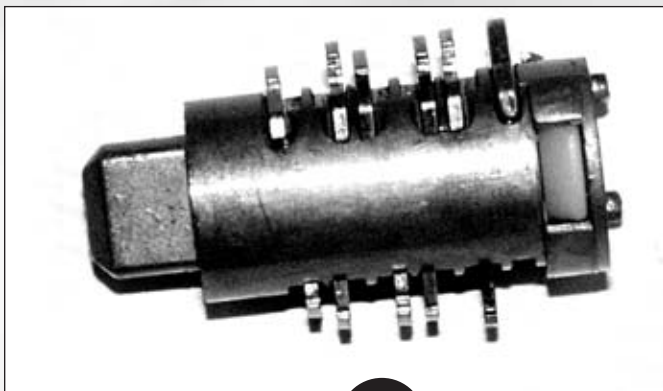
14

Once the cap is removed, the silver hardened faceplate can be lifted out of the way to expose the plug and tumbler chambers.



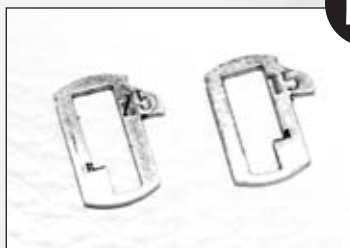
15

The ignition cylinder plug contains 10 tumblers.



16

The last two tumblers in the ignition lock are what is referred to as universal tumblers. No matter what the cuts on the key are in those positions, the tumblers will not rise above the shear line.



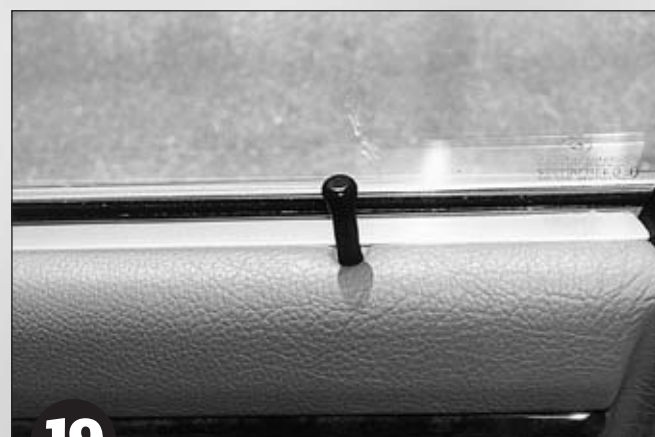
17

The door lock on this BMW is incorporated into the outside door handle.



18

To service the door lock/handle assembly you will need to remove the inside door panel.



19

Unscrew and remove the inside door lock button.



20

Use a small flat blade screwdriver to gently unsnap the front section of the wood trim.



21

Next, remove the metric bolt that is forward of the armrest.

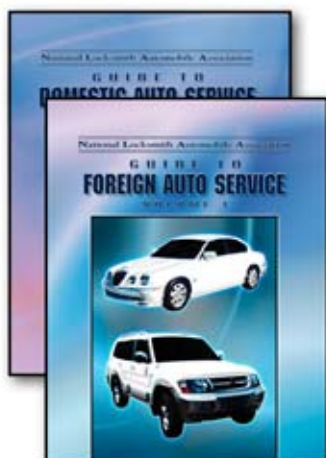


22

You will need to remove the other wood trim panel as well, by using a small flat blade screwdriver.

NLAA Guide to Domestic Auto Service

NLAA Guide to Foreign Auto Service



You get car opening, lock removal and service, column service, key and code series information, and many views of the doors, panels and locks.

[CLICK HERE TO LEARN MORE](#)





23



Unsnap the trim from the rear edge. It is held in place by white plastic clips.



24

Remove the metric bolt that is located to the rear of the inside handle release.



25



Next you will need to remove the door panel light that is located in the front lower corner of the door panel.

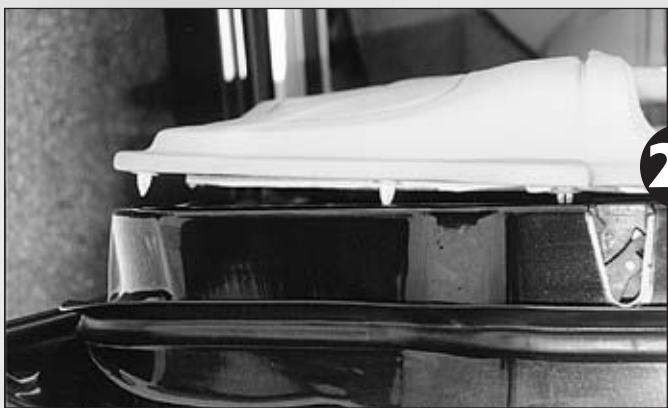
Continued on page 38

Continued from page 36



26

There is a small speaker located on the front upper corner of the door panel that has a screw on the bottom of it that must be removed. Don't forget to gently disconnect the speaker wires.



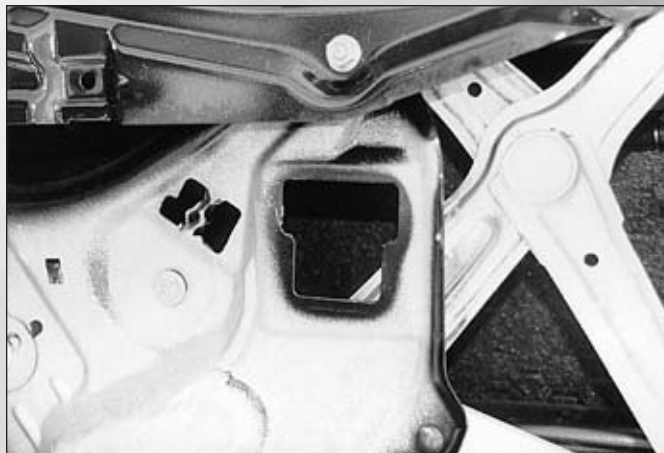
27

The next step is to remove the door panel. The panel is held in place by the standard push in style plastic clips.

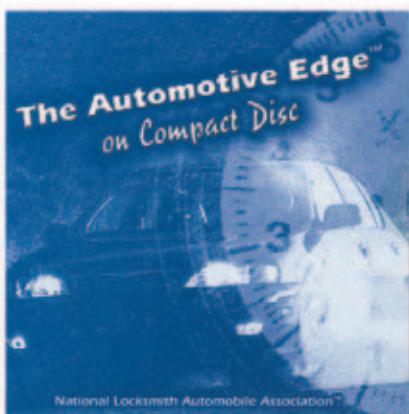


28

There is a large metal clip that snaps into the door frame. While removing the door panel it may be necessary to pull upward on the panel to unseat the panel clip.



AutoEdge



This CD contains over
1,000 pages of automotive
locksmith service.

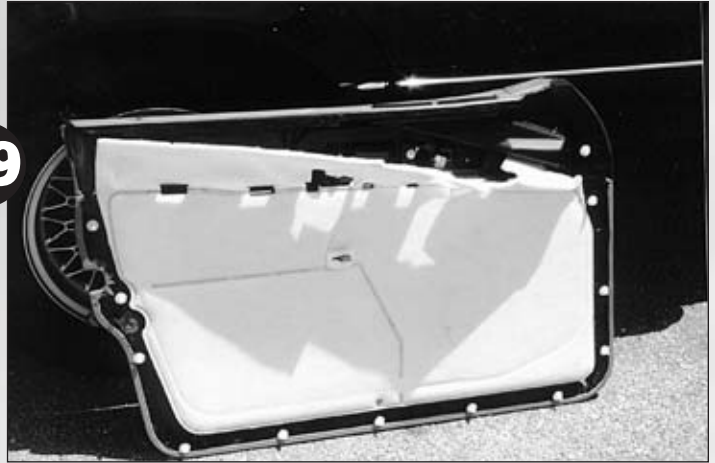
CLICK HERE TO LEARN MORE

#AE - CD



A view of the door panel removed from the car.

29



30

A view of the door with the panel removed. In the next installment we conclude the door lock removal procedure and key making procedures.

TRL

NLAA One Year Membership



The big problem in automotive locksmithing is the tremendous amount of information you need to have at your fingertips.

Free when
you join NLAA

CLICK HERE TO LEARN MORE



Quick Entry

UPDATE

by
Steve
Young



2001 DODGE STRATUS COUPE

The new Dodge Stratus Coupe is actually a Mitsubishi/Chrysler hybrid. (See *photograph 1.*) It has more in common with the Mitsubishi Eclipse than with any other Chrysler product. Like the Eclipse, the Stratus Coupe uses a transponder system that is based on a Mitsubishi manufactured transponder. This transponder is electronically different from the transponders used on other Chrysler products and requires different programming tools and procedures.

Like other Chrysler transponder systems, the one used in the Stratus Coupe cannot be “cloned.” And unlike other Chrysler products, the system cannot be programmed with the traditional Diagnostic And Reprogramming Tool (DART). To program new keys into the Stratus Coupe, you will need the Mitsubishi “MUT2” diagnostic and programming tool. This tool can now be purchased through several locksmith suppliers or directly from Mitsubishi, but the list price of the tool is around \$3,500. In addition to the Stratus Coupe, this tool can also be used to program the new Mitsubishi vehicles that are equipped with transponders such as the Montero, Montero Sport, Eclipse, Galant and Diamante.

The Stratus Coupe uses bicycle-style cables inside the door in place of the traditional linkage rods that we are familiar with. (See *photograph 2.*) These cables are very well shielded against attack with conventional car-opening tools. In addition, the bellcranks at the ends of the cables are enclosed in rigid plastic guards. A heavy rubber strip located at the base



1. 2001 Dodge Stratus Coupe.



2. The Stratus Coupe uses bicycle-style cables.

of the window makes the use of “under-the-window” tools such as the Tech-Train 1015 or 1026 to unlock the car extremely difficult.

Like the Eclipse, the Stratus Coupe uses a style of “sashless” door that has recently become popular with

manufacturers of smaller vehicles. A sashless door does not have a frame around the edges of the window glass. When the door is closed, pressure of the glass against a multi-layer weather-strip that surrounds the upper portion of the door, makes the

weather seal. Unless uniform pressure is maintained between the glass and the weather-stripping, leakage and wind noise will result.

To provide a positive seal, the window glass on the Stratus Coupe actually pivots slightly at the base of the window. This allows the glass to “sag” toward the center of the vehicle as the door is opened. When the door is closed, the glass is the first part of the door to contact the weather-stripping. Contact between the glass and the weather-stripping simultaneously forces the glass to move back into an upright position and drives the upper edge of the glass into a shallow slot in the weather-stripping around the top of the door. This locks the upper edge of the glass into place and provides a very effective weather seal. Attempting to wedge the glass out at the top of the door can result in breaking the glass or damage to the weather seal. Despite all of these obstacles, the long-reach rod of the “Jiffy-Jak Vehicle Entry System” can be used to unlock the Stratus Coupe safely and easily if the proper procedure is used.

To unlock the Stratus Coupe, begin by unscrewing the rubber tip from the long-reach rod and attaching the adjustable handle to the end of the rod. The rubber tip is removed to make the tool fit more easily through the gap between the glass and the weather-stripping. Carefully slip the finish protector sleeve between the glass and the weather-stripping. (See *photograph 3.*) If the sleeve will not slide in by itself, it may be necessary to use a strip of plastic or a plastic putty-knife as a helper-tool to slide the finish protector sleeve into place.

With the sleeve in place, carefully slide the tip of the long reach rod into the finish protector sleeve without wedging the window. (See *photograph 4.*) The weather-stripping under the finish protector sleeve will easily compress enough to allow for the insertion of the tool, and the sleeve will prevent the tool from scratching the glass or damaging the weather-stripping. Once the tool is inside the vehicle, use the handle on the rod to position the tip of the tool over the inside lock control rocker and unlock the door. (See *photograph 5.*) If you wish, a layer of tape can be applied to the threaded portion of the tool to protect the lock control rocker and increase friction.



3. Insert the finish protector sleeve.



4. The tool is inserted into the finish protector sleeve.



5. Pull the inside lock control rocker.

Quick Reference Guide

Vehicle:

2001 Dodge Stratus Coupe

Direction of Turn:

Counter Clockwise(passenger side)

Tool:

Jiffy-Jak Vehicle Entry System

Lock System:

Chrysler / Mitsubishi 8-Cut

Security System:

Mitsubishi Transponder System

Lock Manufacturer:

Strattec

Primary Key Blank:

Strattec 599450

Valet Key Blank:

Strattec 599452

Hand Operated Code Cutters

Code key cutting equipment comes in a variety of configurations and price ranges. From hand held cutters and hand operated punch type machines, to AC operated bench machines. Each offers unique capabilities, levels of precision and operational functions. Here is a look at a few of the hand operated type of code cutting machines currently available.

A-1's Mean Green Machine

A-1 Security Manufacturing has been manufacturing specialty tools for I/C core for over 20 years, so it is no surprise that the company has

introduced a new industrial grade key-combinator for punching Small Format Interchangeable Core (SFIC). Similar to the original Best® key combinator, the Mean Green Machine features a large, side-mounted, depth knob for speeding up the cutting process. Manufactured of cast iron and brass, this heavy-duty machine weighs over 25 lbs. The machine is available for three systems, A2 (#GP201-A2), A3 (#GP201-A3), and A4 (#GP201-A4).

SFIC requires extremely tight tolerances when generating keys and A-1's machine is engineered to handle those demanding tolerances. The location of the depth knob, and its operation are designed to allow for fast and accurate dialing of the required depth.

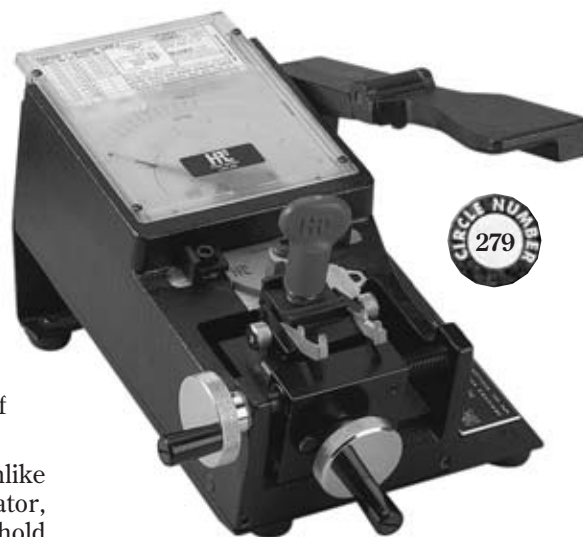
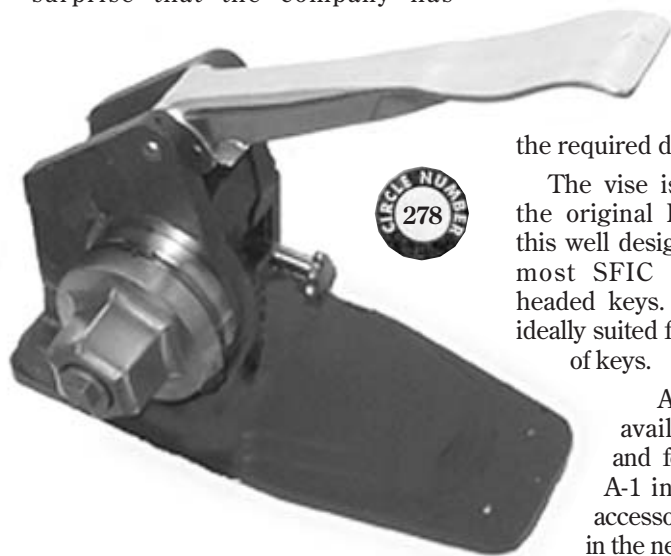
The vise is self-advancing. Unlike the original Best® key combinator, this well designed vise is able to hold most SFIC keyways, even large headed keys. The vise mechanism is ideally suited for swift and sure loading of keys.

Accessory vises are available for specialty keys and for Arrow's Flexcore key. A-1 indicates that additional accessory vises will be available in the near future.

Locksmiths who are serious about SFIC will want to take a good look at this equipment from A-1.

HPC 1200PCH Punch Machine

The Punch Machine™ (1200PCH) is based on the industry standard HPC 1200CMB code machine and is the most versatile punch machine on the market. It is completely portable and punches accurate keys by code,



quickly and effortlessly. It is extremely easy to change from one manufacturer to another because depth and space adjustments are not required. Other machines often require you to purchase expensive cartridges, accessories or additional machines to change from one manufacturer to another. This isn't the case with the

HPC Punch Machine™; this single ingenious machine does it all!

The Punch Machine™ comes complete with 101 code cards, which are inserted into the machine. These cards have depth and space indicators, plus all the pertinent information such as punch, jaw, code series, blanks, and any special information you need. Quite often, just replacing a code card is all that is required to change from one manufacturer to another. The Punch Machine™ is a must for those who need a portable machine to create original keys where electricity may not be available. The Punch Machine™ also includes three Punches, CodeSource™ Code Retrieval Software and Interactive Depth & Spacing Software, making the Punch Machine ready to cut most keys right out of the box.

PRO-LOK Blue Punch

KURCHUNK! KURCHUNK! The PRO-LOK Blue Punch key machine is a dedicated keypunch machine designed to provide factory original keys. The Blue Punch is fast, extremely accurate and easy to use. The key machine is set up at the factory to provide automatic

spacing and depth. This is an ideal key machine for the commercial locksmith, hotels, schools and other institutions. Heavy duty and built to last, this key machine is precision machined to the tightest tolerances. It is portable, dependable and hand operated and no electrical outlet is needed.

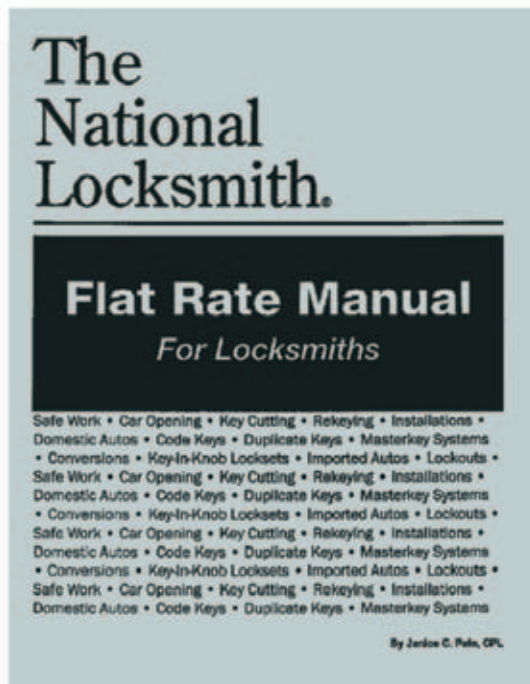
Most locksmiths own or have used a punch type key machine. Some have borrowed one and have been reluctant to give it back to its rightful owner. Portable, compact and hand-powered, these machines can be operated in a shop, service vehicle or right at the customer's door. Designed for the most common commercial and residential lock and key systems, these machines will punch out a key to factory specifications in a matter of just seconds.

Once you get your hands on a PRO-LOK Blue Punch machine you won't want to ever let go. No more dead battery, no more extension cords. Position it, punch it and



present the key to your customer. Period. The PRO-LOK Blue Punch offers reliability, speed, accuracy and durability.

Available for: Arrow, Arrow Flexcore, Best, Corbin C70, Dexter, Falcon, I/C A2, A3, & A4, Kwikset, Master, Primus, Schlage, Schlage Everest B, Schlage Everest C, Schlage Reverse, Weiser and Weslock. **TNL**



Flat Rate Manual

Now you can easily
"Price for Profit!"

CLICK HERE TO LEARN MORE

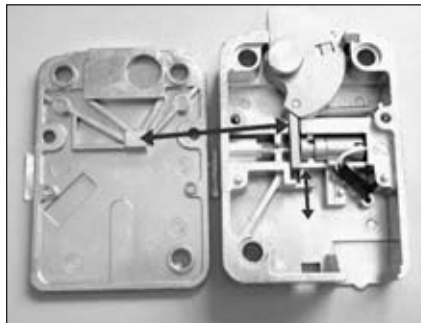


#FRM - 1

LaGard's Dual-Handed Swingbolt



1. The Dual-Handed Swingbolt uses a narrower body.



2. Interior of a handed Swingbolt and Dual-Handed Swingbolt.



3. Relock extension brackets.

LaGard has recently made a notable change to its Swingbolt lock, the series that launched the retro revolution in commercial safes. The Swingbolt lock was released by LaGard in the early 90s, and was used with digital (SafeGard) and serial (SmartGard) locking systems.

For nearly the first decade of electronic safe lock design and production, the LaGard Swingbolt came as a handed lock body. It was used with both digital (SafeGard) and serial (SmartGard) circuitry. Retrofitters and safe builders had to specify the correct bolt handing for their applications. While handed Swingbolt locks can be converted in the field from left to right hand and vice versa, it was always faster and easier to have a correctly handed lock. It also meant added stocking costs.

LaGard has recently addressed this by redesigning the Swingbolt lock body. We've already seen the Dual-Handed Swingbolt in the form of the instantly popular LG Basic, as well as the full-featured SafeGard Swingbolt Model 3600. At first glance, the familiar Swingbolt body profile doesn't appear to have changed much from earlier handed versions, however, a closer look reveals radical changes.

Dual-Handed

The new Swingbolt design is Dual-Handed. One lock body is all that's needed, no matter what bolt hand is required by a safe's boltwork. The Dual-Handed Swingbolt can be installed with either surface of the lock body facing the door. This has the effect of reversing the handing of the Swingbolt.

Narrower Body Design

The Dual-Handed Swingbolt uses a narrower body than earlier handed

versions. (See photograph 1.) Both sides of the Dual-Handed Swingbolt body also has a cable relief channel, one of which is narrower than the other. This is helpful knowledge for technicians who might need to drill open Swingbolt-equipped safes for lost combinations. If there's any question about the orientation of the Swingbolt inside the safe, seeing one channel width or the other, is a clue to the lock bolt orientation. This in turn can save the effort of drilling a second hole to the solenoid if a wrong guess is made. The relief channel guides the four-conductor keypad-to-lock cable toward the end of the lock body opposite the Swingbolt.

The importance the above information relates to the fact that the solenoid position has been changed in the Dual-Handed lock. A comparison of the interior of handed Swingbolt and Dual-Handed Swingbolt shows this best. (See photograph 2.) In the Dual-Handed Swingbolt, the solenoid blocks the movement of a bevel-ended slide that protects the solenoid piston from direct side pressure. The drilling location for the solenoid will therefore be determined by which surface of the Dual-Handed lock body faces the mounting area.

Centered Bolt Location

The bolt of a Dual-Handed Swingbolt lock is centered in its case. This means the bolt standoff distance from the lock-mounting surface is the same, regardless of which side of the lock faces the mounting surface.

The thinner case mounts with shorter screws. The three 1/4-20 lock mounting screws seat flush with the lock body, no matter which way the lock is mounted.

Currently, in the works is a future

design change that will accommodate the SmartGard 8 wire cable.

Trigger Plates and External Relocks

The Dual-Handed Swingbolt still accommodates the attachment of trigger plates for external relocks with a pair of screw holes that accept 8-32 machine screws.

Here it's important to add that LaGard anticipated the fact that making the Dual-Handed Swingbolt's case narrower, would change the physical relationship of relock trigger plates to external auxiliary relocks. Retrofitters can add a pair of relock extension brackets (LaGard Part Number 3188) if needed. (See photograph 3.) The relock extension brackets are specialized spacer blocks that nest in place on the lock body and make up for the reduced case thickness. Using the relock extension brackets is preferable to adding stacks of washers between trigger plates and the lock body, because their use preserves the original spatial relationship. Stacks of washers are an inexact remedy.

The auto-return feature of the Swingbolt to its locked position is unchanged. Some retrofitters might notice a slight difference in the case profile (an increased projection of approximately 1/16" in the area that frames the lock bolt). This will not have any affect in most mounting layouts.

The SafeGard, LG Basic, and LGAudit locks are already being supplied with Dual-Handed Swingbolt. Before the year is out, the SmartGard line will also be using the Dual-Handed Swingbolt lock body.

TNL

The Power of ONE

by Kit Anderson, Director of Marketing, HES, Inc.

Leland Hanchett, founder of Hanchett Entry Systems, Inc. and the inspiration for many of the innovative products we see today, will retire after 25 years of revolutionizing the industry. (See photograph 1.) When Leland Hanchett patented his 1003 Series Electric Strike in 1976, it was the first radical improvement in electric strike technology since the 1880's. (See photograph 2.)

Lee started Hanchett Entry Systems in his basement, in Boston Massachusetts, 25 years ago. In 1976, he patented the first electric strike with a full ANSI opening that was also capable of releasing a 1" deadbolt. This invention, called the 1003 Series Electric Strike, was the first modification to the existing patent since 1880. Now recognized

worldwide, the 1003 series is the foundation for many of the new electric strike features we see today.

Since 1976, Lee has received numerous patents on electric strikes and other electronic devices. He also introduced five additional electric strike series to the market, all of which have had a significant impact on the industry.

With a Master's degree in engineering, Lee Hanchett has a long history of technology related successes to his credit. Lee was one of the original members of the ANSI committee that developed standards for Optical Character Recognition. His space engineering designs were an intrinsic part of the original deep space tracking network, which has developed into today's sophisticated NASA

satellite tracking program. And while employed with General Electric, Lee played a significant role in the development of MICR technology used extensively by the banking industry.

Among Lee's many contributions during his HES years, was the first electric strike to align with mortise locks, the first strike to withstand over 2,000 lbs. of holding force, the first strike with the ability to release under a pre-load, and the first electric strike, ever, with the ability to change from fail safe to fail secure in the field. He also patented the Smart-Pac™, an inline power controller that enabled electric strikes to operate with multiple voltages. (See photograph 3.)

His most recent accomplishment is a new electric strike power supply designed to improve the performance



1. Leland Hanchett



2. 1003 Series Electric Strike.

of an electric strike, electric lock or electric deadbolt. The "Power Punch" will give any manufacture's brand of electric strike the ability to operate under a pre-load. (See photograph 4.)

How did you first become interested in access control, specifically electric strikes?

Lee: I was always inventing one thing or another in my basement in Boston. Security was sort of a hobby of mine. My first patent was actually for an electronic keypad I called the Lectro-Lock. This was during the early 70's.

Was the Lectro-Lock successful?

Lee: No, not at all. In fact in the early 70's I hooked up with an entrepreneur who specialized in starting new companies. With his help I started Hanchett Entry Systems and began showing the Lectro-Lock to companies like Common Wealth Lock and Schlage.

I quickly learned that what the industry really needed was a modern day electric strike. Apparently there hadn't been any modifications on the existing design since the 1800's. This is where I decided to focus my efforts.

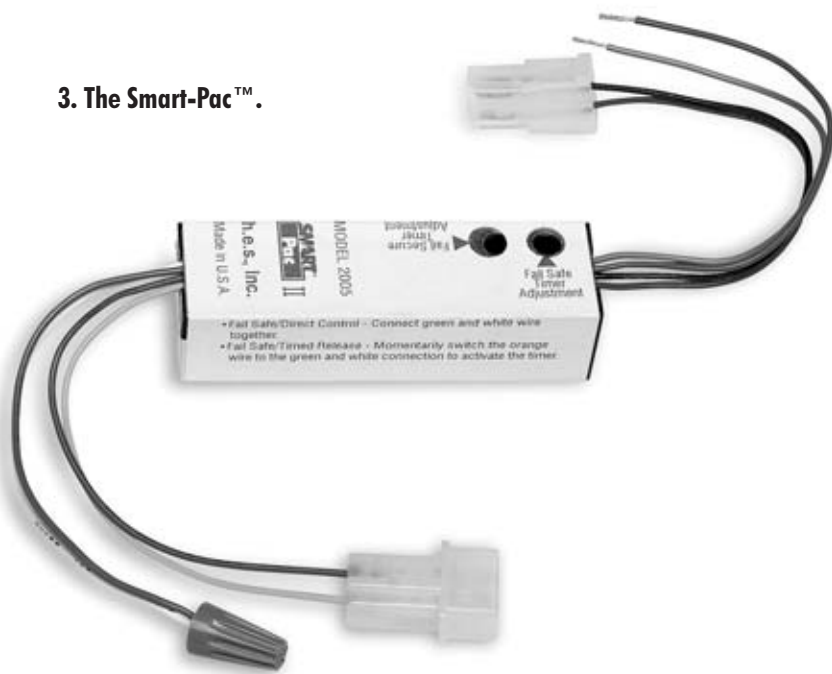
So what did you do next?

Lee: I designed an electric strike that would fit a standard ANSI cutout and accommodate a 1" deadbolt. This was simply unheard of at that time. This strike was the original 1003 series.

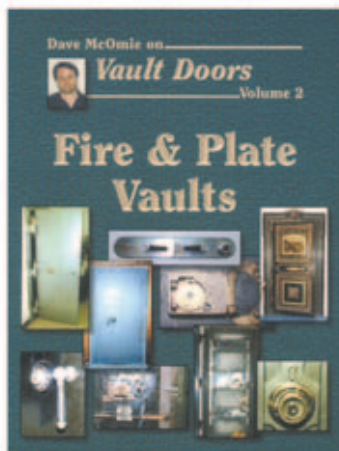
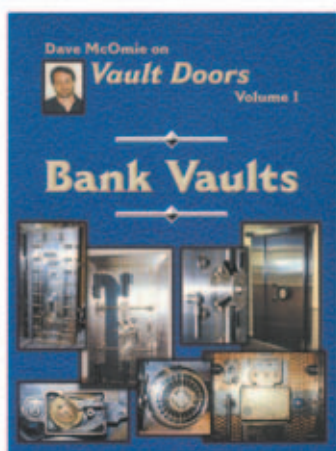
So who was your first customer?

Lee: Our first installation was in an elderly apartment building back east. The codes required electronic exterior access for 350 doors and the 1003 was the perfect solution. I'll never forget during installation when an elderly woman came up to me in the hall to thank me for what we had done. She

3. The Smart-Pac™.



Dave McOmie on Vault Doors Vol. 1 & 2



These openings can be a nightmare, but not when you bring Dave McOmie along with you on the job.

CLICK HERE TO LEARN MORE



must have been about 85 years old. She was so appreciative they we had built something that was so helpful to her. I remember feeling that I had really done something worthwhile. After that I spent many years trying to figure out what else the market really needed

Were you still working out of your basement in Boston then?

Lee: Yes, but not for long. In 1979, I packed up the family and headed for Phoenix. I had lived there previously, my family still resided there and the UL testing facility was nearby in California. During the road trip, we all took turns driving and madly building the electric strikes we were to submit for UL testing the following week. Fortunately, with only a few modifications the 1003 received UL approval.

Did you continue to build electric strikes in your car?

Lee: No. Actually my first real production facility was a tiny 500 square foot house I rented from my sister in Phoenix. Not only was it small, it was in the worst part of town. The drill press was in the closet; assembly took place in the bedroom, and shipping in the kitchen. Believe it or not, we stayed there for 4 long



4. The Power Punch.

years. We only had 3 employees back then, including my wife and myself. The kids and their friends helped out whenever they could, after school and during summer breaks. At that time we contracted with about 22 independent sales reps. By the end of the fourth year we were producing about 200 strikes a month.

Since 1976, you've received numerous patents on electric strikes and other electronic devices. You've also

introduced 5 additional electric strike series into the market, several of which have been copied by your competition. Do you believe these inventions have had a significant impact on the industry?

Lee: Yes I believe so. I think they were the core of the company's success. Our designs filled a void. We gave our customers what they asked for versus telling them what we thought they needed.

Of all your inventions, which do you consider your greatest accomplishment?

Lee: I'd have to say the original 1003 since it was the most radical departure from anything that had ever been done before.

Inventing electric strikes is one thing but growing a successful business is quite another. To what do you attribute your success as a businessman?

Lee: There are two critical factors for building a successful business; the first is sufficient capitalization and second is effective management. We had neither. We were really a bootstrap type of company and learned as we went. When times were low we didn't give up. We just didn't know when to quit I suppose. I'm very glad I never listened to those well-intended comments like "good luck but you'll probably never make it" or "chances are pretty slim you'll be successful."

From 1976 to 2001 HES grew from \$25,000 in annual sales to just under \$10 million with a 14,000 sq. ft. facility. HES is now one of the top three strike manufacturers in the country and your electric strike lines are known word-wide. How does this make you feel about handing the reins over to someone else?

Lee: It feels great! In fact I don't know how I had time to work before. There are so many other things to do in life. Hanchett Entry Systems has always been about service. I attribute the company's continued success and rate of growth to this simple fact. Our customers have always known if they have a problem we are going to fix it. I have no doubt I'm leaving my customers in very good hands.

Today Lee is working on his 5th book about the Arizona territory. He plans on spending much of his time fishing in Montana and working on his web site www.pinerim.com.

Good Luck Lee! **TNL**

Modern Safe Opening



This book is a step-by-step How-To course in safe penetration. Opening safes is one of the most profitable aspects of the locksmithing business.

CLICK HERE TO LEARN MORE



#MSO - 1

The WHEELER Side

Keeping Pace.



by
**Sara
Probasco**

“You were gone a long time last night. Was it that call you took around midnight, or did something else come in later, that I missed?” I asked Don between yawns at breakfast one morning.

“You don’t want to know,” he replied.

I vaguely remembered answering the phone, sometime around midnight, to a woman’s calm, businesslike manner as she inquired about our services.

“We need a locksmith to make a set of keys for a commercial rig,” she said.

“What kind of rig?” I asked. “An oil well, or what?”

“A Peterbilt eighteen-wheeler,” she had coolly informed me. “We have to get it on the road before sun-up. Does this present any problems for you?”

“Not at all,” I replied. “Here’s the locksmith. He’ll need some information from you before he comes.” Poking Don awake, I whispered “Locksmith call,” and handed him the phone while I reached for the pad and pencil on my bedside table to make notes for him.

“Are the keys locked inside?” I heard him mumble into the telephone. “You don’t have keys at all? Okay. Are you the owner of the vehicle? Your name? Where are you located?”

As she answered his questions, he repeated the information aloud, so I could write it down for him. Then I gave the page to him and snuggled back under the covers. It seemed a fairly run-of-the-mill service call, except for the hour. But Don’s rather unusual comment about it at breakfast had twanged my curiosity.

“What do you mean, I don’t want to know?” I asked.

“The whole thing sort of read like a Mickey Spillane tale.”

“Tell me more.” Always a sucker for a good yarn, I eagerly awaited the details.

This is the story he told:

She was a real looker, the dame who called me for help. When I pulled up in front of the all-night convenience store, she was waiting outside, leaning against the telephone booth wearing a T-shirt that said “Waltz me around again, Willie!” and a pair of tight, faded Levis tucked into scarred red alligator cowboy boots. She was smoking one of those long, oval cigarettes. The night air was hot and still, and the smoke curled lazily above her head.

“Are you the locksmith?” she asked in a sultry voice as I walked toward her.

“At your service,” I replied, not realizing what I was letting myself in for.

“You’ll have to follow me to the site,” she said. “It’s a couple miles out in the country.”

I followed her shiny red Camaro down the twisting blacktop road until we came to a black Pontiac that was pulled off to the side of the road, almost hidden by a thicket of cenizo. Two men stepped out. By the light of the full moon I could see on down the way a piece, a farm house with an eighteen-wheeler rig parked beside it. The Camaro pulled off the road and I slammed to a halt behind her.

“Did you call the police?” one of the men asked her.

She nodded. “They should be here at any minute. Any signs of life there?” she nodded toward the farm house.

“Nope,” he said, “but you never can tell. It’s best to be careful. We don’t want anybody getting hurt.”

I gulped before I spoke. “I’m not sure I understand what’s going on here. You want me to make a set of keys for that vehicle, right?” I pointed in the direction of the farm house.

“That’s right,” she said.

“Then, let’s get to it.”

“We need to wait until the police arrive.”

“I thought the rig belonged to you.”

“It does,” the man replied.

“Then what’s all the secrecy, and why the police?”

“The man in that farmhouse works for me, hauling machine parts from an assembly plant in Mexico to our factory in California,” the man explained. “The rig he drives is ours.” He indicated himself and the woman. “The problem is, this guy has a lot of personal and financial problems. Sometimes he hits the bottle pretty heavy, and he sort of goes nuts.”

“I’ll say,” the woman chimed in. “We recently found out he’s maintaining two households. It seems he has a wife and children who live here, and another family at the other end of the line.”

“You mean, he’s a bigamist?” I asked.

“Actually, he may not be married to either one of the women, but he definitely has two families, and they probably don’t know about each other,” the man said. “He’s always into us for an advance on his wages.”

“The biggest problem is, we never know where he is any more. Sometimes he’ll disappear for days, missing delivery deadlines. When we finally told him he was fired, he wouldn’t turn over our rig to us, so we’ve come to get it,” the woman explained.

“I brought another driver,” the man said, tilting his head to indicate the second man leaning on the hood of the Pontiac, “but I had Margo, here, call the police, just in case this guy gives us trouble.”

“Good thinking,” I said, wondering how I had gotten myself into this mess in the first place, and how I might get myself out. I made a mental note to take out an unlisted number in next year’s telephone directory.

Suddenly, the area was alive with flashing red and blue lights as three, four, five police cars wheeled up. At

least their sirens weren't on. Before the dust settled, one of the officers emerged and huddled with the owners of the rig, conversing in hushed tones. Then he returned to his vehicle and motioned for the three of us to follow him. We fell in line and climbed into his vehicle.

Lights still flashing, they circled the rig and quietly waited, with the doors opened as shields, and weapons drawn, just in case. Two officers accompanied me to the rig, where I set to work making a set of keys for it.

It wasn't until the owner's new driver cranked up the rig and slammed it into gear that the former employee burst from the house in a rage, wearing just a pair of undershorts. Several of the fuzz surrounded him and managed to finally get him back into the house. That was the only time I saw him.

As I was packing up the last of my tools, I overheard the man who owned the rig say to one of the officers, "Man, I'm sure glad nothing serious happened here tonight. That guy has been known to go completely berserk. He had a gun, you know."

"He did?" the policeman asked.

"You didn't see it? He had it stuck in the waistband of his drawers, at the back."

As Don finished his tale, we both were silent a moment, ruminating over the dangerous aspects of the situation. Then, to break the tension, I said, "Well, I hope you charged appropriately for your services."

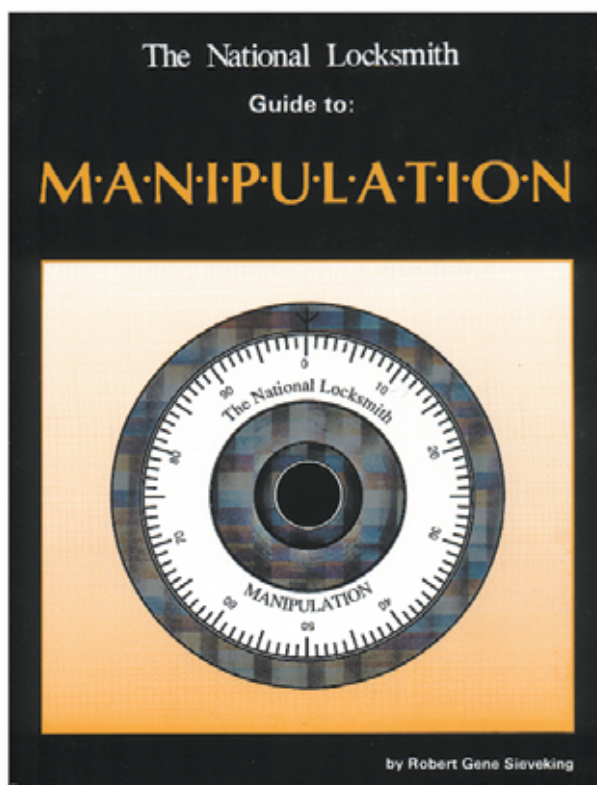
"Are you kidding?" he asked. "I charged them late night rates, weekend rates, and holiday rates, and then added an extra twenty per cent 'PM' charge."

"You mean for the extra-late night call?"

"No, I mean on top of the extra-late night call — a Pace-Maker charge. The way my heart was racing while I was doing the work, and then came to a screeching stop when I heard about the guy's gun. I figure I may need one of those things before long, so I may as well be starting a savings account toward it now!

TNL

Manipulation Home Study Course



Our home study course guides you on step-by-step process, teaching you everything there is to know about manipulation.

CLICK HERE TO LEARN MORE

#MAN - 1

LOX-OFF™



Drilling the Safe and Easy Way.

by Richard Allen Dickey

There is a great new tool out called LOX-OFF™ that has captured my interest. It is a drilling jig used to drill open all kinds of locks. It can be used with padlocks as well as key-in-knob locks and lever locks. It can be used to drill a shear line, a retainer screw or simply an access hole. It will hold your drill in perfect alignment while protecting your hands. It will also control the depth of the hole you are drilling. Sound too good to be true? Let's take a look and see.



1. The LOX-OFF tool and accessories are stored in a plastic case.

LOX-OFF comes complete with a case and all of the accessories needed to use it in many different ways. (See *photograph 1.*) Included in the kit is a 20-page manual full of information about how to use the jig as well as where to drill and how deep to drill.

The LOX-OFF clamping blocks are made of a high-density plastic. (See *photograph 2.*) This makes them light and also protects the surface that it touches from scratches. The two blocks are squeezed together by a 3/8" bolt. An Allen wrench is provided

for the tightening of the bolt. There is no need to over tighten it, a snug fit is all that is needed. There are three different length bolts supplied with the tool, so it can be used on almost anything.

One of the clamping blocks has a hardened drill guide that has been molded into the plastic. (See *photograph 3.*) This will prevent the drill bit from slipping and scratching the surface, while at the same time holding it in perfect alignment.



2. Two clamping blocks are used as the main clamping device.



3. The end of one clamping block has a hardened drill guide molded in the plastic.

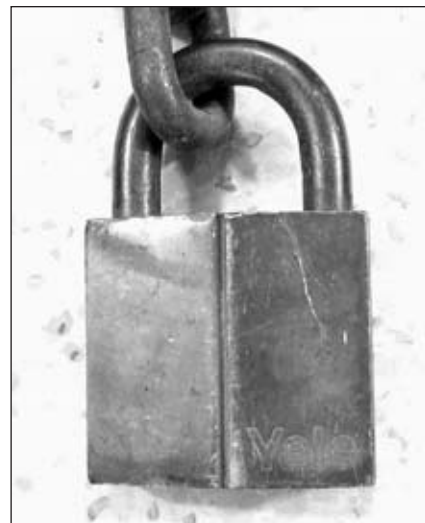
Next to the drill guide is another hole that is used to guide a tap. Why a tap? It can be used to repair a hole drilled into a lock body by allowing you to do a perfect job of tapping it. After tapping, a screw can be threaded into the lock body and ground off smooth.

To show how easy it is to use the LOX-OFF system, I decided to do a little testing on my own. The first thing I wanted to do was to drill the shear line of an old padlock.

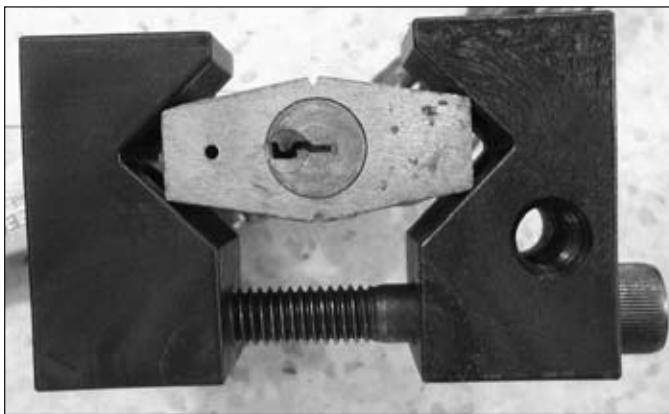
I picked an older Yale padlock that has been lying around for a long time. (See *photograph 4.*) The first step is to place the lock in the jig. The bottom of the lock should be flush with the bottom of the jig. (See *photograph 5.*)

Next, a slotted bar (see *photograph 6.*) has to be attached to the jig. (See *photograph 7.*) Because of the slot in the bar, it can be adjusted to any position needed. Here it is adjusted so it will align the bit with the shear line.

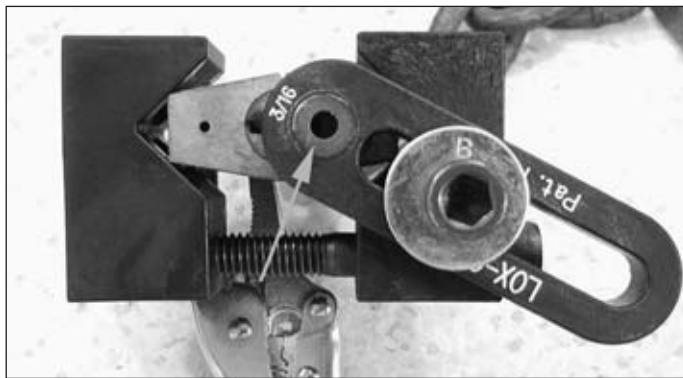
Drilling the shear line is a simple task after the jig has been set up. (See *photograph 8.*) The hardened guide protects the high-density plastic, while also keeping the bit perfectly aligned.



4. Here is our test lock.



5. The lock body is clamped firmly in place.



7. A hardened drill guide is located at the end of the slotted bar.



6. A slotted bar is attached to the main clamping device.

As you can see, the 3/16" bit did a nice job. (See *photograph 9.*) This is obviously a destructive method of opening the lock, but very effective. With a screwdriver, the cylinder is easily turned to the open position. (See *photograph 10.*)

Another type of opening method is to drill the retaining screw that is used to hold the lock cylinder in place on many rekeyable locks. With LOX-OFF it is a simple task.

Obviously the first step is to determine where to drill and how deep to drill. The measurements for

many locks are listed in the manual. If the measurements for your specific lock are not in the manual, you can take your own measurements by using another lock of the same model.

Supplied in the kit is a T head scale and a black marker. They work nicely to measure and mark a position to drill. (See *photograph 11.*) After marking the drill point, align the mark made with the marker to the alignment mark on the jig. (See *photograph 12.*)

Before drilling, be sure to adjust for the proper depth. This is done by



How To Pick Locks

With both learning software and tool set, you'll have everything you need to learn and perform the art of skilled lock picking.

CLICK HERE TO LEARN MORE

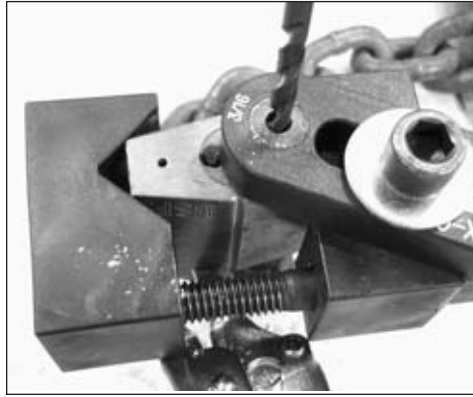


Key Manager



Designed both as a complimentary product for ProMaster and also as a stand alone product, this is a premium quality program, developed in accordance with industry standards and requirements for this type of software.

CLICK HERE TO LEARN MORE



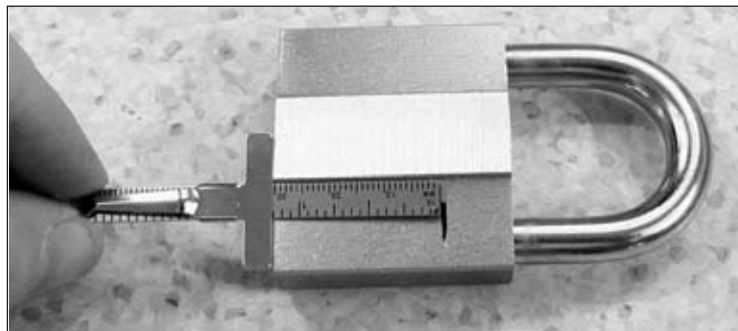
8. The drill bit is held firmly in place by the LOX-OFF jig.



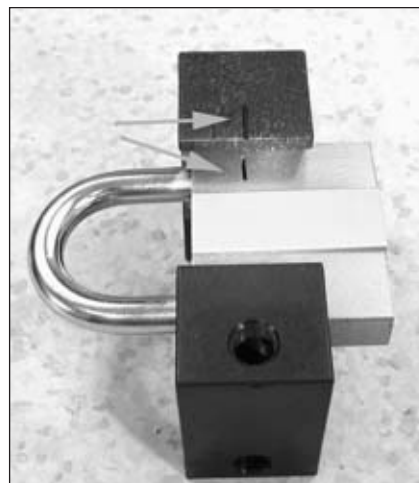
9. A perfectly aligned hole is made in the lock.



10. After drilling, the cylinder is easily turned with a screwdriver.



11. A "T" head ruler is supplied to measure and mark the lock.



12. Align the mark on the lock with the mark on the clamping block.



13. Stop tubes are included in the kit.



14. Drilling the hole is made safe and easy with the LOX-OFF jig.



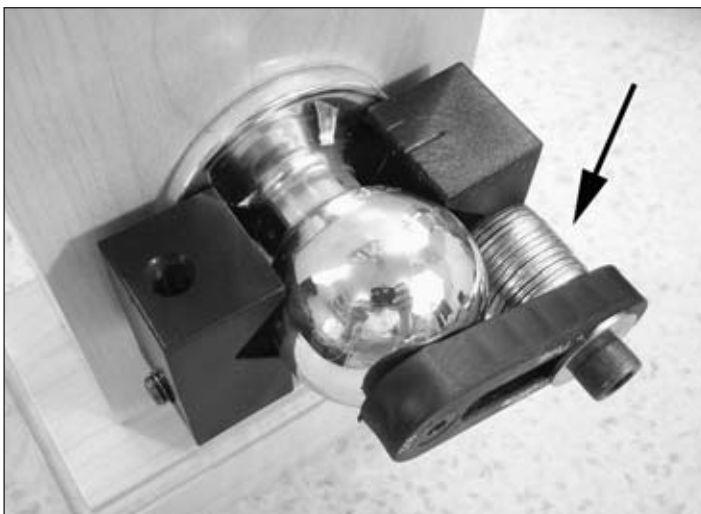
15. The hole in the side of the lock can be repaired.



16. The tap is held straight while it is turned into the lock body.

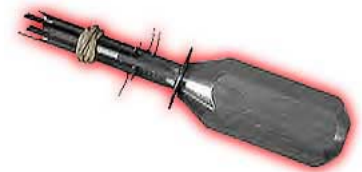


17. LOX-OFF can be used to drill knob locks and lever locks.



18. The slotted bar is held out from the main clamping block by using spacers.

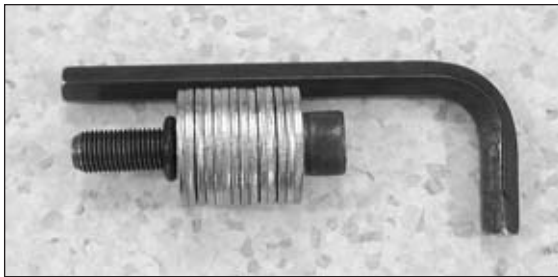
How To Pick Tubular Locks



This software shows you every step of tubular lock picking in clear and simple detail.

[CLICK HERE TO LEARN MORE](#)





19. Plenty of spacers are supplied in the kit as well as an Allen wrench.

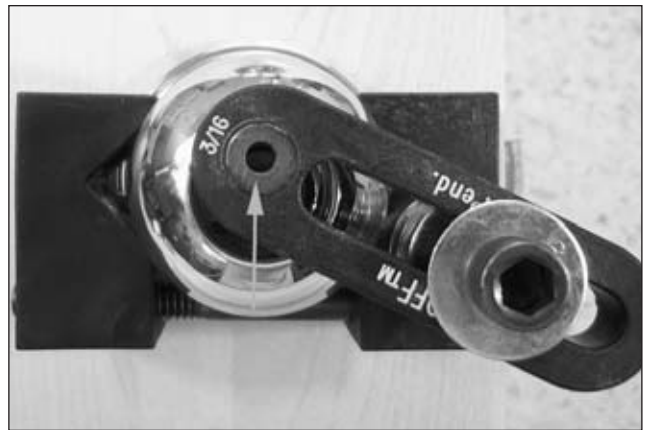
using a combination of stop tubes and the proper bit position in the drill. (See photograph 13.) Drilling into the side of the lock is very easy to do with the LOX-OFF jig.

The hole is intended to bore into the side of the lock and through the retaining screw. (See photograph 14.) If you do it right, the lock cylinder will fall into your hands like a piece of over ripen fruit. If it doesn't, you may have to drill just a little deeper. An extra 1/8" should do the trick.

After the lock is open, it can be repaired. Slide the lock in the jig so the black mark on the lock body aligns with the tap mark on the jig. (See photograph 15.) Slide the tap through the hole and it will be held in perfect alignment during the taping process. (See photograph 16.)

Another use for the LOX-OFF jig is drilling knob or lever locks. I wanted to see how well it would mount to a knob lock and how easy it would be to adjust.

The main part of the jig is easily mounted to the knob. (See photograph 17.) The next step is to attach the slotted bar. This time spacers were needed so the slotted bar would align properly with the knob. (See photograph 18.) The spacers were provided with the kit for this purpose. (See photograph 19.) It is easy to adjust the slotted bar to the point that is intended for drilling. (See photograph 20.)

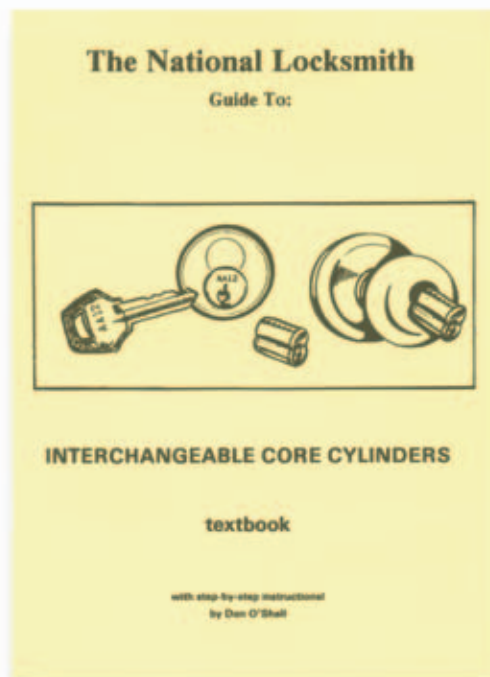


20. The slotted bar is easily positioned for drilling.

There are many uses for LOX-OFF. However I think that it's most important point is its safety. Holding a lock while attempting to drill a precision hole can result in a drill bit slipping from the lock and entering your hand. This can't happen with LOX-OFF.

For more information about LOX-OFF, call (214) 654-1708. You can also send a request for information to LOX Mfg. L.C., P.O. Box 35482, Dallas, Texas 75234. Circle 281 on Rapid Reply.

TNL



Interchangeable Core Cylinders

Covers all this...

- Best/Falcon/Arrow/Eagle/(A2)
- Best A3
- Best A4
- Corbin X Removable Core
- Corbin Z Removable Core
- Russwin Removable Core
- Emhart System 70 Removable Core
- Sargent Removable Core
- Schlage, Yale, Lockwood
- Medeco Removable Core

CLICK HERE TO LEARN MORE



BEGINNER'S CORNER

Steadfast Armored Ignition Collars

by
**Raymond
Moreno**

This month we will take a look at the installation steps for the Steadfast InvisiGUARD security collar. (See *photograph 1.*) The InvisiGUARD on the far left is the one I will be installing onto my Ford van. The one in the middle is for Chrysler vehicles and Jeeps, and the one on the far right is the Steadfast Pro for Nissan vehicles.

The first step is to remove the ears off of the ignition. (See *photograph 2.*) Just take a screwdriver, place it under the ears as shown, and pry it off. (See *photograph 3.*)

After this first step is done, go to the bottom of the steering column shroud and remove the three screws that hold the shroud in place. (See *photograph 4.*) There are four holes on the bottom shroud but only three contain the screws to remove it. The fourth smaller hole is made to access the retainer to remove the ignition.



1. The Steadfast InvisiGUARD security collar.



2. Remove the ignition ears.

In *photograph 5*, I have removed the bottom and top shroud and you are looking at the bare steering column.

In the next sequence of photographs show the process of preparing the InvisiGUARD unit for installation.

First place the shear-head bolts onto the body. (See *photograph 6.*) Then slide the clutch cup into the body. (See *photograph 7.*) The InvisiGUARD is now all dressed-up and ready to be installed. (See *photograph 8.*)



3. Take a screwdriver and pry it off.



4. Remove the three screws that hold the shroud.

In *photograph 9*, I'm pointing at a small, gray plastic piece with a couple of wires attached to it. This is the buzzer actuator. Be careful with this piece, as it is very flimsy and easily broken. Place the InvisiGUARD over the ignition lock (see *photograph 10*) and hand-tighten the top screw. (See *photograph 11.*) Then hand tighten the two bottom shear-head bolts. (See *photograph 12.*) With the InvisiGUARD hand tightened



5. The bottom and top shroud removed.



6. Place the shear-head bolts on the collar.



7. Slide the clutch cup on.

Continued from page 70

in place, check to ensure that the key works smoothly in all the ignition functions. (See *photograph 13.*)

If everything works properly, the InvisiGUARD can be permanently installed. Tighten the shear-head bolts (see *photograph 14*) until the heads snap off. (See *photograph 15.*)

In *photograph 16*, you see the exposed ignition face after replacing the top and bottom shrouds. Now we install the new replacement bezel.



8. The InvisiGUARD is now ready to be installed.



9. This is the buzzer actuator.

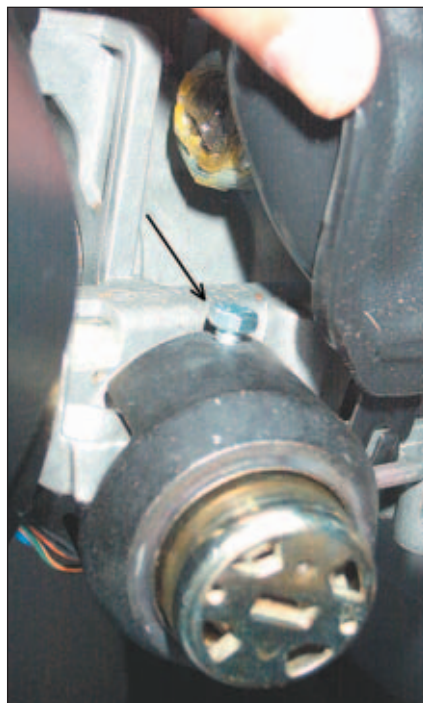


10. Place the InvisiGUARD over the ignition lock.

The two holes on the replacement bezel are getting lined-up with the two holes of the clutch cap. (See *photograph 17.*) Then just snap on the replacement bezel and install the two screws to secure it. (See *photograph 18.*) And, wha-la, the job is complete. (See *photograph 19.*)

With the InvisiGUARD in place, it looks as if there is nothing installed on the column, but gives the owner/operator more confidence against a pop-n-pull theft of the vehicle.

Now that the InvisiGUARD is installed, what do you do if you ever need to remove one? Just remove the



11. Hand-tighten the top screw.



12. Hand tighten the two bottom shear-head bolts.

two shear-head bolts. Here are a couple of techniques I use to remove shear-head bolts.

Photograph 20, shows a shear-head bolt screwed into a beam of wood with the head snapped-off. I installed a washer under the shear-head bolt because when I tried to snap off the head off without it, it buried itself into the wood. The washer was used to keep it from screwing itself any deeper into the wood.

The first method to remove shear-heads bolts is with a countersink. Lay it on an angle on the outer edge of the bolt and give it a few whacks with a



13. Ensure that the key works smoothly in all the ignition functions.



14. Tighten the shear-head bolts.



15. Tighten until the head snaps off.



16. The exposed ignition face.



17. There are two holes in the replacement bezel.



18. Install the two screws to secure it.



19. The job is complete.



20. A shear-head bolt screwed into a wood beam.

2002 AutoSmart™



Major changes, additions and revisions to the AutoSmart Book™ have been made, and the 2002 AutoSmart™ is now available!

[CLICK HERE TO LEARN MORE](#)



Auto Lock Service



Covers opening and
service techniques.

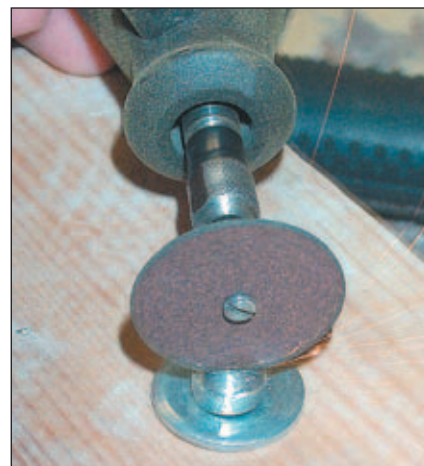
CLICK HERE TO LEARN MORE



#ALS - 1



21. Remove shear-head bolts with a countersink.



23. Cut a slit on the top of the bolt.



22. I use an automatic center-punch.



24. Use a plain flat head screwdriver to remove it.



25. Drill two very small holes onto the top.

hammer to break the bolt free. (See photograph 21.) This method will usually work acceptably, as long as you have the room to swing a hammer on the countersink.


My personal favorite method is to use an automatic center-punch, lay it at an angle on the outer edge of the bolt and just push till it "clicks" the bolt loose. (See photograph 22.) This method works well as long as the bolt is not too tight or seized in place.

Another method to remove shear-head bolts is with a Dremel tool. Cut a slit on the top of the bolt with a slotting cutter. (See photograph 23.) Once a slot is cut, use a plain flat head screwdriver to remove it. (See photograph 24.)

The final method I'll offer can be used if you have the room to get a drill

and bit on the bolt head. Drill two very small holes onto the top of the shear-head bolt. Then you use a tamper resistant screwdriver to unscrew it. (See photograph 25.)

Well, that's about it for Steadfast security collars. For more information contact:

Secure Car Enterprises, Inc.
1965-1 New Highway
Farmingdale, N.Y. 11735
Phone: 800-616-8338, (516) 293-8030
Fax: (516) 293-0690
Circle 282 on Rapid Reply. 

by Dale W. Libby, CMS



Agassed Again

The title is a play on words. Occasionally I come across an old safe that has tear gas installed on the back of the combination lock. This is more of a do as I say and not as I do article. In the 'old' days there were a lot of advertisements for tear and nausea gas devices. I remember that Badger advertised a large line of single and multiple type devices to be installed on the back door of safes. Lately, I have not seen any ads for this type of burglary/forced entry type of protective device.

A little non-technical history is in order. Most modern tear gas devices that still work are of the "Non-Deteriorating" type. They were installed at the back of the combination lock or curb. They consisted of a glass tube packed in cotton inside of an aluminum container. (See illustration A.) There was a plunger sticking out of the housing against the back of the lock. If the lock was punched, the plunger would break the glass tube that would flood the inside of the safe with volatile tear gas. Volatile means that if you break the tube at one side of a large space, the gas will quickly move throughout the whole area. Usually a house or office, unfortunately.

A newer type of gas was then introduced which was called 'nausea gas.' This gas was heavy and not volatile. When broken, the gas would surround the safe or container and protect the safe itself without driving everyone out of the building. I have yet to experience this type of gas, and I do not want to.

I have never seen this type of device installed on a newer type safe

mechanism. All the installations I have seen have been on safes that are vulnerable to punching attack. One of the favorites is the Yale OB type mechanism that has been used on countless safes in the past. I have never seen it installed on a modern Group I or Group II combination safe lock. The gas bomb was used on safes without relockers for the most part.

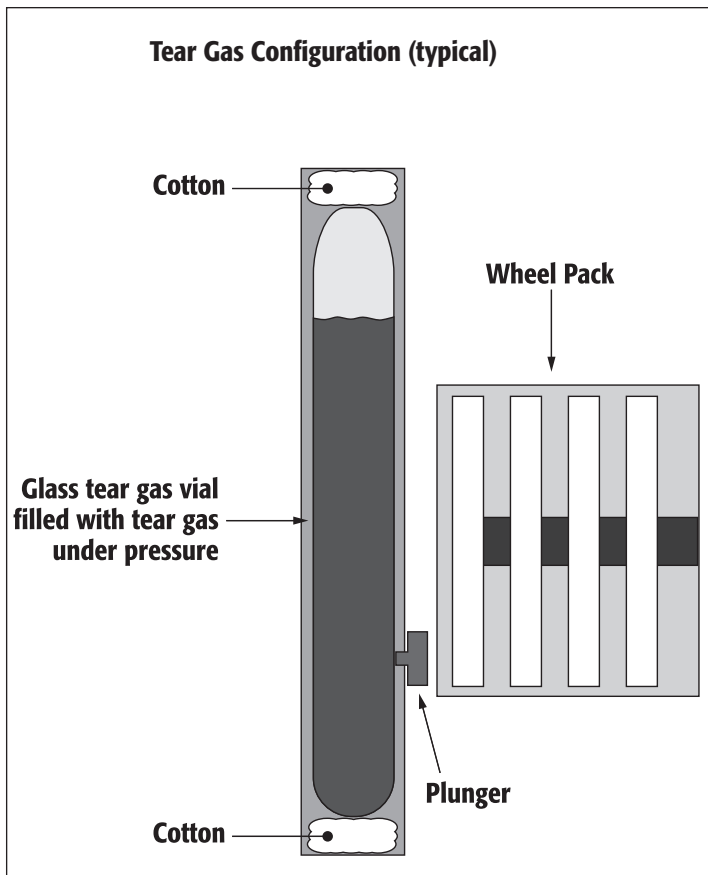
shotgun shell with a primer and firing mechanism. I charge to take them off the safe to protect the customer and the environment.

I took an informal survey of several of my safecracker friends in the Illinois area and most stated that they never have been gassed. Even Little Tommy has never had the displeasure

of being sprayed or exposed to tear gas. My kids were with me once in an old house where I set off a canister of tear gas by accident, and for weeks they told everyone that I had forced them to smell tear gas. Luckily that was long before child abuse was ever thought of, and I really did not force them to smell the gas. It just happened.

An important point that I usually forget is that the real gassing occurs when the safe door is opened, not necessarily when the vial is cracked. Yes, there is a minor escape of gas through your drilled hole. Your drill smells like it is burning up, and your eyes water. Instantly you know what has happened. You can continue with lots of fresh air and many breaks in the drilling, but the full effect is not felt until you open the door. Before opening the safe door, take a large breath of fresh air and hold your breath. I forget this after a few years, but I

relearned my mistake quickly as I am gagging and falling to the floor. The customer wanted to call the paramedics last week, but I recovered in about 10 minutes to where I could breathe again. Not nice, not pleasant. Why do I do it? Here follow a few



1. Typical tear gas configuration.

I have drilled open many safes with the "Non-Deteriorating" units and have not set them off. I have drilled about six safes and have set off these bombs, knowing that tear gas was present. It is the luck of the drill. As we say, "Stuff Happens!" I have come across other gas protective devices that have not worked and looked like a

Continued on page 78

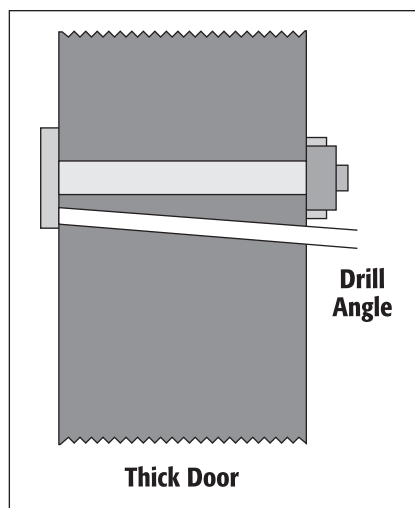
Continued from page 76

important concepts that may help you to avoid using a gas mask when drilling an old safe.

The safe that I was called on to open was a Trumbull safe made in Chicago. At least that is what was painted on the face of the door. I have no pictures of this safe for it is not important who made the safe. I could see by the handle and dial; that this was a safe with a Yale OB type lock mechanism. Remember, most times it is important to attack the lock and the safe will open. It makes no difference who made the container or what color it is, or even the size of the container; attack and defeat the lock and most times the safe or chest will open. When it comes to relockers, then the brand of the container will tell you what additional measures must be taken to get it open.

A good example of this is when a locksmith is called on to open a locked house. He does not ask who made the house, how many rooms are in the house, what are the outside measurements of the house, etc. He goes and attacks the lock, and when he opens the lock the house is also open. The same is true in

safecracking. Open the lock, open the safe. On older safes this is very important but there is a major problem that causes mis-drilling.



2. Angle drilling thick door with lock.

On older and antique safes, outside the dial drilling is called for. Older dials may be hard to pull and impossible to replace. If the customer wants the safe repaired you have two options. You can drill outside the dial

and ring, or you can drill through the dial ring. Either way, most times with a Yale OB lock mechanism, you must drill in at an angle either near the drop-in point at 6:00 o'clock, or somewhere where you can angle in and see the edges of the wheels. Once you determine the position of the gates in the wheels and the combination at your drilled hole location, you can move or transfer the gates in the wheels to the fence position and the lock will open. Nice in theory.

Drilling at or near the drop in position is dangerous. You might drill and destroy the end of the weighted lever while trying to get a good site position to view the gates through the bottom of the lock. Yes I have done this too. Drilling away from the drop-in position is also dangerous. The case surrounding the wheel pack is round and made of cast iron. If you start angle drilling this case to see the wheels, it is possible and highly likely that your drill will slip off more than once and skid to the back of the lock. This causes you to miss the wheel pack and drill through the back of the lock and then into the tear gas canister.

NSO One Year Membership



**Free when
you join NSO**

To make big profits
in safe work with no
hassles...you need
information!

CLICK HERE TO LEARN MORE

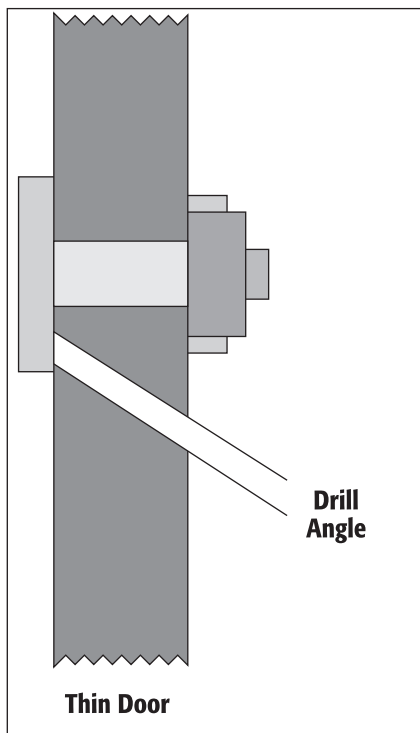


The main problem with drilling a safe with an OB lock is, not knowing the true thickness of the safe door and the correct angle to drill, to see the edge of the wheel pack. There is no standardization on old safes. A thick door requires a flat angle of attack. (See *illustration B.*) A thin door, or a door where the lock is mounted to the inside surface of the outside of the door requires a very acute angle. (See *illustration C.*) Most times I split the difference and see where I come out wrong. Then, I adjust the angle accordingly. Sometimes on a thick door, a little adjustment at the front becomes a large adjustment at the back of the door and tear gas is released.

The safe in question was at a large auction house and part of a large estate. The grandchildren wanted the safe opened and all the contents removed. They then wanted the safe repaired ready for sale at the auction. I told them that I would open the safe but could not guarantee it could be repaired, and if repaired, my price for doing the job would be far more than they could hope to get at the auction. They did not care. They wanted it done quickly. The safe was a large

Trumbull and weighed about 800 pounds. The dial did not turn freely and I could not even count the wheels.

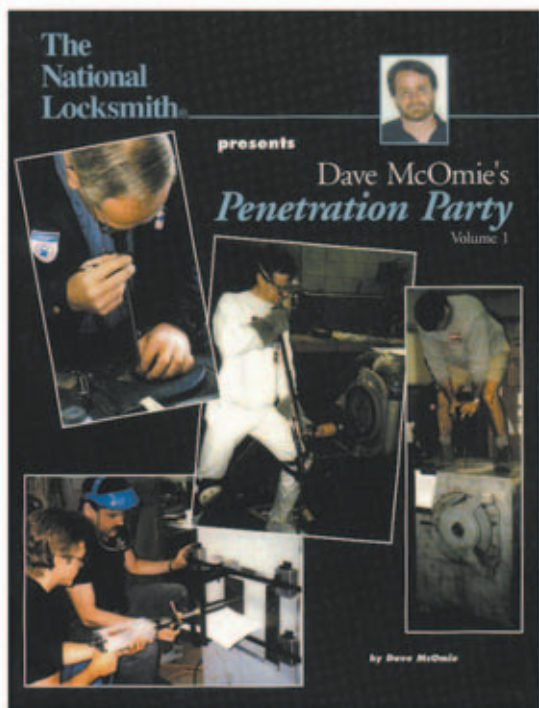
The safe had a "T" handle and a



3. Angle drilling thin door with a more acute angle.

combination lock with the word YALE on the cap in the center of the dial. Obviously a Yale OB combination lock configuration. (See *illustration D.*) Nothing too complicated here. A Yale lock of this vintage, is a gravity-operated lock. When the combination is dialed, a weighted lever forces the fence up into the bottom of the lock mechanism. At the other end of the lever, the end of the lever lowers enough to let a protrusion on the bolt bar move over the previously elevated end of the lever. A simple and diabolical quantum improvement over the direct drive type of lock mechanism that was in great use at the turn of the 20th century.

Previously to that, most safes used the direct drive "Sentry" type of combination lock arrangement. When you put pressure on the opening handle, one could feel the gates and the false gates on the drive and other wheels of the lock. Pressure would bind the dial and this would help in determining the combination to open the safe. With the advent of the OB type lock, when pressure was put on the handle, little or no pressure was transmitted to the drive wheel and the wheel pack.



Penetration Party

- Uncensored! • The Safes! • The Tools!
- The Action! • The Perfect Openings!
- The Bloopers and Blunders!
- The Slick Tricks!

[CLICK HERE TO LEARN MORE](#)

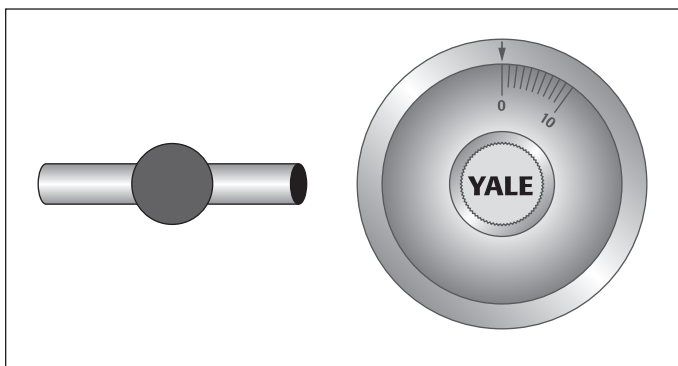


Because the lever is operated by gravity, it is hard to manipulate this lock. The contact points were very soft and sometimes hard to determine. With the early OB mechanisms, the safe could be turned upside down and the safe opened. Once this was discovered, a pin was installed to keep the lever from falling up, even if the safe was inverted.

Sometimes these older safes are more of a challenge than the newer ones. After correcting my angle of drilling attack, I drilled a perfect hole to view the three wheels of the combination lock. After turning the now looser dial, I was dismayed to see that the wheel pack was not responding and the wheels were not moving while I turned the dial. With eyes tearing, I explained to the nice lady auctioneer that the safe would not be able to be repaired and that the tear gas had been inadvertently set off. It took about 2 minutes before her eyes started tearing. Her office was at the front of the auction barn while the safe was at the back. She did not care at that time. She wanted the safe open

so the relatives could get their junk out of the safe and the safe moved outside to air out.

Wanting to do as little damage as possible, instead of whacking off the dial and punching from the outside, I inserted a thin punch into my drilled



4. Sample Yale OB configuration.

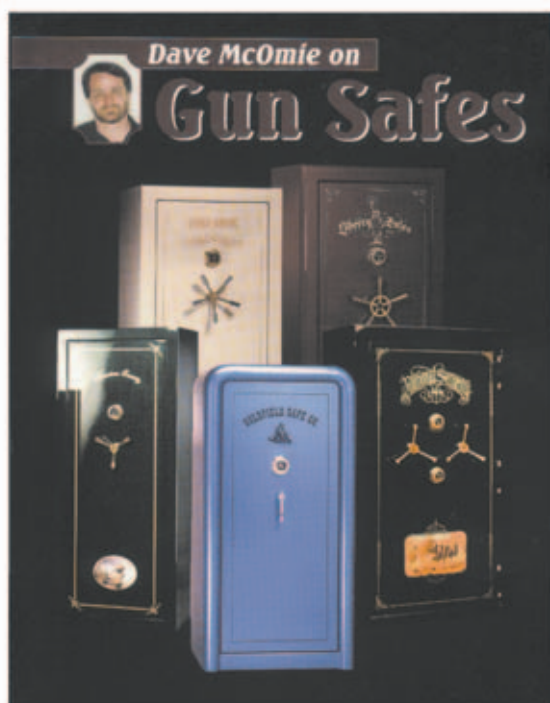
hole and walloped the wheel pack. Wham, wham, wham, and the handle turned easily. Stupidly I pulled the safe door open and got a face full of tear gas. I was too eager and lost my common sense if I ever had any. (Mensa Safecracker that I am)

When I was able to breath again, I moved the safe outside into the cool crisp night air and left it open. The inner compartment was filled with paper records and ledger books that smelled like tear gas. No jewelry, no money, no guns or goodies, just old records from the early 1900's.

Historically interesting if you are into that stuff. I am not. Since I gassed her auction house, I charged a little less than my agreed upon price.

I told the auctioneer to leave the exhaust fan on all night and the barn would be all right the next day for the auction. I told her to leave the safe outside until the relatives claimed the papers inside the safe. I fixed the safe so it could not lock. I removed the locking bar part of the OB mechanism. The dial was still on. The drive pin was missing from the drive wheel, and that is why the unit did not dial open. Open, wear a tear gas mask when in doubt, and prosper.

TNL



Gun Safes

Need a drill point or
relocker drill point on
a gun safe?

CLICK HERE TO LEARN MORE



#GS - 1

TECHNITIPS

YEAR-END PRIZES



Grand Prize

Silca Bravo Duplicator



1st Prize

HPC's 1200PCH
Punch Machine



2nd Prize

Mas Hamilton's
PowerLever 2000



3rd Prize

Curtis 2200 Duplicator



4th Prize

SDC Magnetic Lock,
Keypad and Exit Switch



5th Prize

Securitron 12-Volt Unlatch Plug in
Trans & Touchpad Retail Value \$650



6th Prize

LaGard "SmartGard"



7th Prize

Detex Advantex



8th Prize

Arrow 400 Series Alarmed
Exit Device & S-75 Mounting
Plate Kit for Narrow Stile
Aluminum Doors



9th Prize

\$500 in BWD Products



10th Prize

\$500 in ASP Auto Locks



11th Prize

\$500 in Strattec Auto Products



12th Prize

Tech-Train "Jiffy Jack"



13th Prize

Sargent & Greenleaf 6120
Electronic Safe Lock



14th Prize

High Tech Tools
2000 Pro Set



15th Prize

Slide Lock's Master "Z" Tool Set



16th Prize

ESP Products Sampler



17th Prize

Major Manufacturing's
HIT-111 Drill Guide



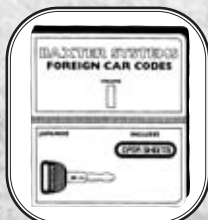
18th Prize

Abus Padlock's Marine
Padlock Display (\$120 Retail)



19th Prize

MBA USA, Inc.
Falle Pick Set



20th Prize

Baxter JV-1 & JV-5
Code Books



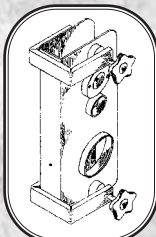
21st Prize

Sieveking Products
Squeeze Play



22nd Prize

Rodann's RV500 Wireless
Door Annunciator System



23rd Prize

A-1 Security Manufacturing
Installation Jig



24th Prize

Keedex Sampler



25th Prize

Framon
Impressioning
Handle



26th Prize

Gator Tool Multi-Purpose
Facecap Tool

These Prizes Awarded Each Month!

- BWD Automotive Ford or GM KwiKit
- Wedgeco™ Key Extractor Kit
- Strattec Racing Jacket
- HPC Air Wedge™
- Sargent And Greenleaf 4400 Series Safe Deposit Box Lock
- A-1 Security Products
- ILCO Key Blanks (100 Blanks)
- Keedex "SPIN OUT" Screwdriver
- Tech Train Training Video
- Sieveking Products Gm E-Z Wheel Puller
- Major Manufacturing Products
- Slide Lock's "Z" Tool Opening Set
- The Sieveking Auto Key Guide
- Jet Key Blanks (100 Blanks)
- High Tech Tools
- LaGard Combo Guard

Send in your tips, and win!

How To Enter

Send a tip on how to do any aspect of locksmithing. Certainly, you have a favorite way of doing something that you would like to share with other locksmiths. Write your tip down and send it to:

Jake Jakubowski, Technitips Editor,
The National Locksmith
1533 Burgundy Parkway
Streamwood, IL 60107-1861

Or send your tips via
E-mail to: Natlock@aol.com

Rules & Regulations

Each tip submitted must include your full name, street address (no P.O. Box numbers), city, state, zip code, phone number, fax number and e-mail address.

Every Tip Published Wins

If your tip is published you will win one of the monthly prizes listed. At the end of the year, we choose winners from all the monthly tips published, that will be awarded one of the fabulous year end prizes. All you have to do to win is enter.

Prizes are arranged according to suggested retail price value.

Tips Start
on Next Page

Permanently Mounting Sectional Trim

A problem a locksmith will often encounter on wood door preps for full mortis locks is loose sectional trim. This problem is often due to the thinness of the door material that is left after completely mortising the door to accept the lock case. Because there is so little thickness left, there is very little wood to hold the mounting screws that hold the trim in place.

Here is a simple, cheap and proven method for securely and permanently mounting sectional trim, such as knob roses, turn pieces, occupancy indicators, latch guards and other hardware, under less than ideal contains.

Remove the lock case and drill through each of the desired mounting hole locations and insert a "T" nut of the appropriate size inside the mortis cavity. (See illustration A.) Then using a machine screw (usually a 6/32 or an 8/32) cut to the proper length and attach the required trim to the face of the door.

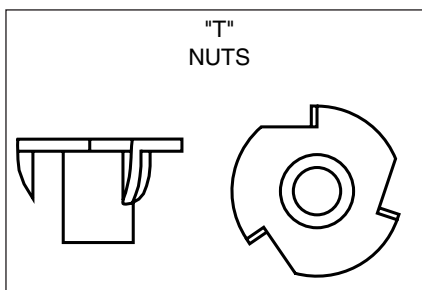


Illustration A.

I have found that oval, Phillips head machine screws in brass or stainless steel, depending on the lockset finish, will give a professional appearance to the completed installation.

You should use machine screws to tighten the "T" nuts since, the mounting screws that come with the lock set have a coarser thread than the "T" nuts do. You can obtain "T" nuts in many hardware stores or at any machine shop supply house.

Peter Schifferli
New York

Cut Tubular Picking Time In Half

If you use HPC's Tubular Lock Pick (Model TLP-C-B) to pick open ACE and ACE-II type locks, here's a way I've found that can cut you tubular lock picking time in half!

First remove the spring from a discarded retractable ballpoint pen. The spring will be about an inch and one half long. Grind, cut or file one

A Few Words From Jake...

I have received numerous requests over the years to reprint a specific tip, or to send a reader a copy of a certain tip that they remember reading, but don't remember which issue the tip was printed in. Unfortunately, I really can't respond to those requests for several reasons. One of them being that each of the columns is written sixty days before it appears in the magazine and the logistics of keeping track of the requests and then re-publishing certain tips would seriously cut into the time it takes to prepare a fresh, and interesting column each month.

However, in an effort to respond to both requests, I've decided that for this month, I will publish twelve tips that I consider useful, relevant tips that have been published over the last five years or so.

I want to thank the tipsters that sent them in originally and the readers that let me know they wanted to see some of these tips again.

Speaking of sending in tips: Next year I begin my ninth year as The National Locksmith Tech Editor. Whatever success I've had with this column over the years is due to the locksmiths that have shared their ideas, tricks and tips and the contributors of the prizes that we award. Without you and the manufacturers who contribute prizes it would not be possible. Thanks to everyone for your support.

Last month, I sort of jumped the gun and printed a URL that never came about. It was for the new product I said I had invented and was having manufactured. Okay, here's the straight scoop. My universal, retrofitable toilet stall latch is a done deal. You can get all the information you want about the *Johnny Latch by Jake®* by visiting: www.johnnylatch.com. I apologize for the inconvenience.

See y'all next month.



by Jake
Jakubowski



Photograph 1.

end of the spring until it is approximately .543" in length. Now use some Beeswax or a similar substance to coat one end of the modified spring and insert it in the barrel of your TLP-C-B. (See photograph 1.) The Beeswax will hold it in place. Now set the picking "fingers" of the pick and insert the pick into the lock. You'll find that all you'll need is a very gentle inward pressure and to gently turn the pick left, or right, depending on the lock you're trying to pick. Now pick as usual.

Once the lock is picked, remove the spring before duplicating or decoding the pick.

John M. George California

Editors Note: John, I've got to confess, your tip intrigued me and I just had to take the time to find out whether or not, such a simple idea would really improve the

pickability of ACE type tubular locks. So... I got out a couple of old Taylor mortise cylinders with a tubular keyway, gave them each a shot of WD-40 and set to work. Keep in mind these old Taylor's have been hanging around my storeroom for about ten years, or so. At any rate, the first one picked on the first try and the second one on the second try. Without the spring, it took me two tries for each one. Now, I know that quickly picking two cylinders does not indicate a trend, but it sure felt like they picked easier with the spring then without.

Metal Door Deadbolt Installation

Here's how I install deadbolts in metal doors with or without a center seam. I start by marking down from the top of the door approximately thirty to thirty-six inches and carry that line around both sides of the door and across the edge. Then, using my square, I measure back from the edge, an additional 1/16" to any backset that I'm using. If the backset is 2-3/8" the measurement would be 2-7/16" and if the backset were 2-3/4" the measurement would be 2-13/16". This gives the location for the cross-bore hole.

Next, using my square again, I find and center my mark for the edge bore. I do this by putting the 2" mark on the

one side of the edge and the 4" mark on the other side. Then by sliding the square up or down, when the 3" mark intersects with the line I drew earlier, I know the edgebore hole is dead center. (See illustration B.) From this mark, I measure 13/16" up and 13/16" down. That gives me the location for

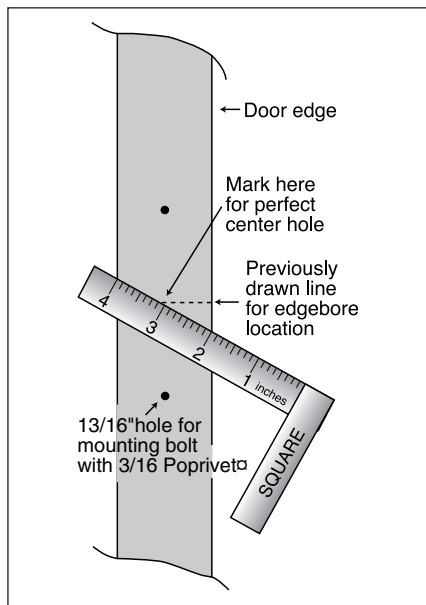


Illustration B.

drilling the holes to attach the faceplate of the deadbolt to the inside edge of the door. The next step is to drill all the pilot holes and then open them up with a proper sized hole saw. If necessary, I clean out any insulation that might be in my way and attach the bolt's faceplate to the inside of the door with pop-rivets.

At this point, I apply a little white grease to the end of the bolt, shut the door and use a screwdriver to push the bolt against the frame. That gives me the location for my 1" hole for the bolt. I drill that hole and de-burr the edges, assemble the rest of the lock and I'm on my way.

*Allan Poabst
 Canada*

Editor's Note: First, Sieveking Products Company makes a great tool called a Squeeze Play which makes mortising the edge of a door without a seam child's play. Also, Major Manufacturing makes some great mounting tabs (Part #'s LMB-O1 and LMB-O2). Finally, I've used your method frequently but carry it just one step farther. Before I pop rivet, I place a washer over the rivet on the inside of the door. That strengthens the bolt even more.

WD-40 Refiller

I carry a 2oz. can of WD-40 and have used the same 2 oz. can over the past several years. Every time my 2oz. can of WD 40 is emptied, I fill it up from a larger-sized can of WD-40.

All you need to accomplish this is an empty 2oz. WD-40 spray can and any larger sized can of WD-40. Plug the snorkel from the larger can into the nozzle of the smaller one and depress both nozzles at the same time.

The pressure in the larger can is sufficient to force the lubricant and propellant into the smaller one. When the smaller can is full (you can tell by the sound of the lubricant being sprayed) release both nozzles simultaneously.

*Kenneth P. Lee, CPL
 Oklahoma*

Editor's Note: Just a word of caution. I tried Kenneth's tip and it did work. However, when he says you need to press both nozzles simultaneously, he's right! Also, keep in mind that you are working with two cans, the contents of which are under pressure. Be very careful since even the plastic extension nozzle can hurt if it pops out of one can and hits you in a sensitive area, particularly the eye.



The Ultimate Technitips Collection

Here's one of the most useful books ever available to the locksmith!

[CLICK HERE TO LEARN MORE](#)



Opening Locked Atrium Locks

Here's how I solved the problem of opening Atrium styled door locks when they malfunction and cannot be unlocked from either side of the door.

First, to get your point of reference, you have to imagine that you are looking at the edge of the door with the door open. As you look at the edge of the door, if the deadbolt is at the bottom with the latch at the top, the drill point is always on the left side of the door. If the deadbolt is on the top with the latch at the bottom, the drill point is always on the right side of the door.

First, remove all external trim. Now, measure in from the front side of the faceplate in line with the top of the deadbolt 1-5/8". (See illustration C.) Then measure down from the top edge of the faceplate 4-3/8". Where these lines intersect is where you drill a 1/4" hole. Reach through the hole with an ice pick or similar tool and pry up on the deadbolt detent. While holding the detent, use a knife or small screwdriver to work the deadbolt back into the lock case.

If the spring latch is the problem, measure down 2-9/16" from the top of the faceplate or visually sight the center of the latch. Draw a straight

line 1-1/2" in from the front of the faceplate. Drill a 1/4" hole where the lines intersect. Again using an ice pick or similar tool, reach through the hole and work the latch back to open the door. (See illustration D.)

*Ben Steen
West Virginia*

Editor's Note: Atrium locks have given many a locksmith a migraine. I understand that Atrium is out of business, but knock-offs can be obtained from Ultra Hardware or Trans Atlantic. Both are, as far as I can see, exact replicas of the Atrium.

Opening the Dreaded BMW Deadlock

The tips that I read seem to be of the opinion that you cannot open a deadlocked BMW without having a key. I say rubbish!

Following is a simple method of opening a BMW with an engaged deadlock and no available key. First locate the bonnet (hood, if you prefer) emergency release catch. This catch is located approximately four inches to the right of the center of the grill. (See illustration E.) At this point you should see a small hole which is partially blocked. Insert a screwdriver in this hole and twist. The bonnet should open.

On some models, this hole is visible through the grill and on other models, you need to unscrew the bottom of the grill and gently pull it outward to gain access to the hole. Next, take a piece of wire and connect the battery's positive terminal to the coil's positive side (it should be marked 15) and the dashboard lights will light up.

At this point, the car now thinks the ignition is on and the deadlock (electrical) mechanism is switched off in the driver's door.

Now simply insert your wedge between the glass and the door and pull the central locking relay upwards and the door will open. I do believe that the American Models still have buttons that can be hooked, so you may be able to just pull the button up.

*D. Nash
England*

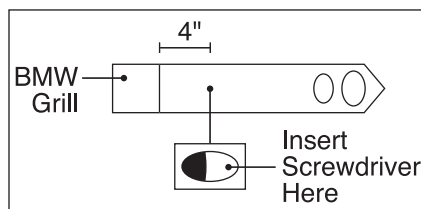


Illustration E.

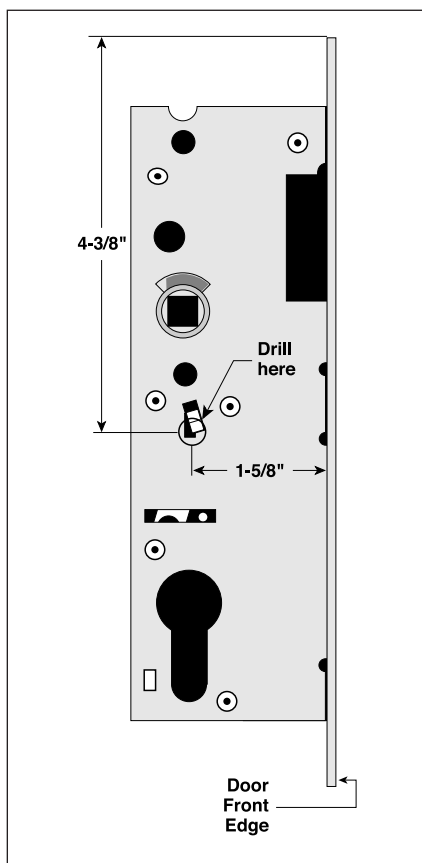


Illustration C.

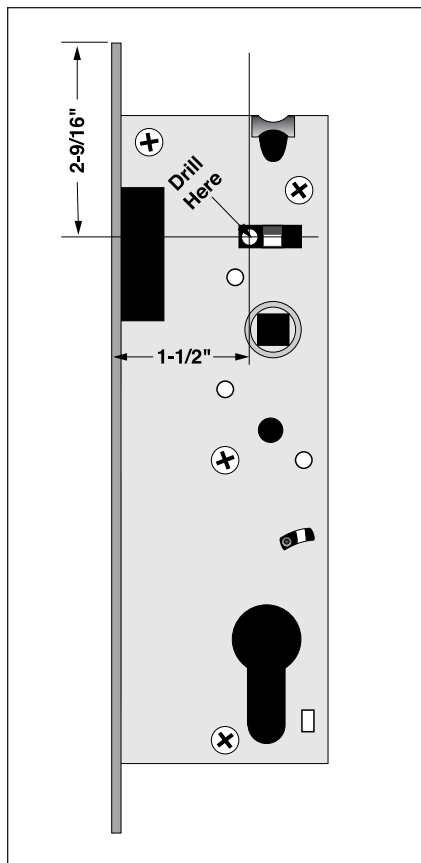


Illustration D.

Diebold 80-55 Replacement

Every once in a while you encounter a safe, or safe head that is obsolete. There are limited parts available, but the customer insists on keeping it in service. Such was the case with an old Diebold lug door with a 180-55 MP lock that a customer of mine had purchased from the U.S.P.S. The lock did not have a wheel pack, or back cover in it and my customer wanted me to put the unit in working condition.

I did not have a Diebold replacement wheel pack for this lock and parts are no longer available from Diebold, so I did the next best thing. I fit another lock in its place.

After studying what was left of the original lock and mechanism, I had an idea. I modified a Sargent & Greenleaf 6700 series lock by cutting down the case of the lock and installing it in the Diebold lug door. (See photograph 2.) This photograph shows the lock in the locked position. Note that I have cut away a fair portion of the S&G lock case.

To install the S&G lock, I had to drill and tap 1/4 x 20 holes to accept



Photograph 2.

the cap screws I used to secure the 6700 to the door. The lock was mounted on shims to keep pressure off the wheel pack when the case was tightened.

Since there was no cover for the lock, a screw was inserted in the lever to prevent the lever from sliding off the post. A Plexiglas cover prevented anything from entering the lock. There was a fair amount of modification that went into this lock retrofit. However, there was little option considering parts for this lock are no longer available.

The safe has been in service for two years and eight months since I modified the locking mechanism without any problems.

*Vincent J. Kane
Pennsylvania*

Vin Identification

In 1981, The National Highway Traffic Administration and the Department of Transportation required all automobile manufacturers who sold vehicles in the United States, to use a standard- sized seventeen character Vehicle Identification Number.

The most important digit in the VIN is the tenth digit since this is the digit that indicates the model year. Following is a list of the alpha codes that signify the vehicles model year. Cut it out and keep it in your truck as a reference.

*Ken Zelten
E-Mail*

E - 1984
F - 1985
G - 1986
H - 1987
J - 1988
K - 1989
L - 1990
M - 1991
N - 1992
O - 1993
P - 1994
R - 1994
S - 1995

T - 1996
V - 1997
W - 1998

Marks Security Cylinder Opening

The call was to open a Marks 91-A, full mortise lock set with a high security cylinder. The customer had misplaced his keys and did not want me to drill the cylinder and ruin it.

After examining the lock and comparing it to one that I had in my van, I first unscrewed the outside door knob from the spindle. Then I tried to shove the spindle through the lock case and into the apartment. However, the pin stop on the spindle prevented me from pushing the spindle through the lock case. (See illustration F.) I used a pair of Vise-Grips® to grip the exposed spindle and by working the Vise-Grips up and down, I was able to break the spindle and remove it from the lock.

I drilled a 1/2" hole through the faceplate, and approximately 1/2" down from the bottom of the cylinder which put my hole in line with the thumb turn. (See illustration G.) I drilled just deep enough to enable me to see the backside of the thumb-turn's spindle. Once I had that spindle



Locksmith Dispatcher 2000

Controlled Service
dispatching software
specifically for
the locksmith!

[CLICK HERE TO LEARN MORE](#)



exposed, I used a flat bladed screwdriver and inserted in the spindle hole to throw the deadbolt to the unlocked position.

I then inserted a modified spindle that I had made into the spindle hole and shoved it far enough in, so that it would engage the inner spindle hub. (See illustration H.) By binding the inner hub with the tool and turning it, I retracted the latch and opened the door.

Once the door was open, a new faceplate, spindle and some Plumber's Epoxy were all that was needed to repair the door and lockset.

*Michael Maldonado
New York*

Volvo Ignition Trick

The retaining snap ring on Volvo's S70 ignition can be removed without destroying the ignition, or anything else.

At the four o'clock position, 5/16" back from the face of the ignition, drill a small hole. (Let me caution you to make sure you drill at the four o'clock position and not at, or near, the three o'clock position. Why? Because at the three o'clock position, there is a flat steel bar that will make your day less than

serene if you drill there. Once you have the hole drilled, you should be able to see one end of the retainer.

Next drill a series of small holes in a clockwise arc, downward around the column, about 3/4" long. Clean out between the drilled holes to create a slot. Using a small screwdriver or similar tool, pry up on the end of the retainer. Use a small pair of Vise-Grips® to grasp the end of the retainer and work it out. This will distort the retainer somewhat, but it can be re-formed and reused.

Another cautionary note: There is a small cap near the switch at the three o'clock position. Do not remove that cap, since its removal will do nothing for you but cause you grief!

Once you have removed the retainer ring, you can locate a large steel plate at the bottom of the housing that is staked in place. This plate needs to come out just a little to release the cylinder. To lift up on this plate, it is necessary to grind away some of the staking and then drill a small hole next to the plate so you can use a probe and pry the plate up. Just remember the plate only has to move a little bit to release the cylinder. Once you have the cylinder out you can service as needed.

*Mike L. Martin
Washington*

1998 GM Savanna Tip

The 1998 GMC Savanna Van uses the typical 10-cut GM doors and ignition locks. The doors have six cuts, spaces 6-10, and the ignition spaces 1-9. I could have gotten the codes from GM, but I was showing one of my drivers how to retrieve the code if no code was available, and since this was a new vehicle, I decided to see if there were any changes.

I first remove the lower shroud, then separate the two halves of the shroud, remembering the bottom half has hooks on the back and it must be slid back before it can be removed from the upper half.

Then I loosened the two Torx bolts that hold the upper half of the shroud to gain access to the locking sidebar. It is at about the seven o'clock position and had it picked in about 5-minutes. But here comes the hard part, I could not find the active retainer using the A-1 picking tool. I remembered that you could remove the ears from the ignition, so I removed the ears with two screwdrivers. Once removed I could see the retainer. It was on the

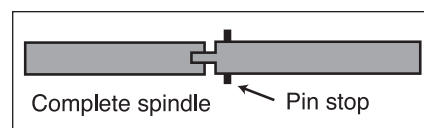


Illustration F.

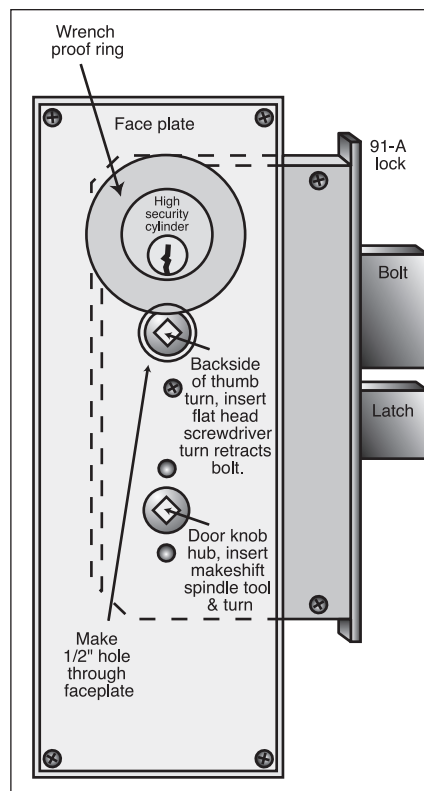


Illustration G.

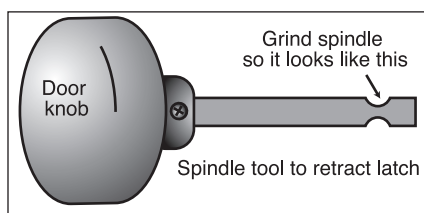


Illustration H.

opposite side of the plug from the others I have done, and the tool was not long enough to reach the retainer. It would have had to be about 1/2" longer.

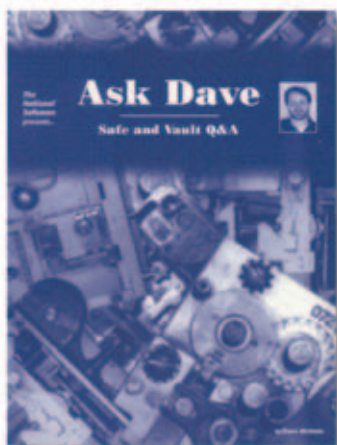
I found out that you could not even come from the backside of the plug because the tool was not shaped right to get it from that side. Once I removed the ears from the lock I could reach the retainer with a dental pick or similar tool.

The rest of the job was normal. The ignition needs to be in the "On" position to remove, read the code and replace.

*Ben Freiburger
Nevada*

TNL

Ask Dave



CLICK HERE TO LEARN MORE



#AD - 1



Unlocking the TOYOTA HIGHLANDER

by Tony Vigil

The Toyota Highlander is Toyota's newest addition to its growing line of SUV's. (See *photograph 1.*) America's fascination with the SUV continues and Toyota is making sure it has its fair share of the market. The Highlander is built on the same chassis as the Camry, but does not share the lock linkage with the current model Camry.




1. The Toyota Highlander.

The Highlander uses an all cable door lock linkage system. The well shielded cables are inaccessible and therefore can not be unlocked using conventional door unlocking tools.

Begin unlocking the Highlander using the High Tech Tools 65 tool, which is an inside access type tool. (See *photograph 2.*) This vehicle is best opened from the rear door, since the weather-stripping up front is too tight for a comfortable opening.

The first step is to insert the tool. The position is important, insert it too far back or towards the front and inserting the tool becomes difficult. Lower the tool into the door about half way down, so the top of the tool is under the door glass. (See *photograph 3.*) Move the tool forward in the door to get the tool in the correct position to unlock the interior locking button. Using the tip of the tool, move the lock button to unlock the vehicle. (See *photograph 4.*)

For more information contact High Tech Tools at: 1400 SW 1 Street, Miami, FL 33135. Phone: 1800-323-8324 or 205-649-7014. Web: www.hightechnetools.com. Circle 308 on Rapid Reply. 



2. Use the High Tech Tools 65 tool.

3. Lower the tool about half way down.



4. Move the lock button to unlock.

BUSINESS BRIEFS

Dugmore & Duncan Opens Texas Branch

The stocking warehouse in Austin, Texas, is the newest addition to the existing locations, found in Massachusetts, California, Florida and Illinois. The new location, at 4401 Freidrich Lane, has over 6,000 square feet of space. The company, which specializes in the sale of Sargent products, has also expanded its outside sales team.

Dugmore & Duncan can be reached at (888) 384-6673. In addition to Sargent, the company is also a stocking distributor of McKinney, Securitron, hes and IEI products.

RCI Exit Devices Available in US

Rutherford Controls Int'l Corp. (RCI) has launched their line of exit devices in the United States. Previously, RCI exit devices were only available in Canada. They are surface-mounted and offer a variety of functions, including mechanical, electric latch retraction and switch bars.

RCI exit devices are nearly impossible to pry or force open. They use a unique, patented interlocking latch and strike design. Stainless steel jaws actually grip the strike, securing the door to the jamb and completely encasing the lock. Because safety is also a prime concern, a gentle push on the exit bar easily releases the latch.

Dortronics Appoints Sales Representative

Dortronics Systems, Inc. announced the appointment of Nelson & Associates, Inc. as the company's sales representative covering the Rocky Mountain territory, specifically the states of Colorado, Utah and Wyoming. The agreement, which is effective immediately, was announced

today by Bryan Sanderford, National Sales Manager, Dortronics Systems, Inc., from the company's headquarters in Sag Harbor, New York. Nelson & Associates is the latest addition to Dortronics continually growing sales network.

To reach Nelson & Associates, Inc. Phone (801) 295-0328, Fax (801) 295-4535 or Email: melnelson@jps.net

Aiphone Announces Rep of the Year

Alby Currant Sales was recently presented with Aiphone's annual Rep of the Year award. The company qualified for the award by achieving the highest sales over their quota for 2000. Alby Currant Sales is one of Aiphone's 18 independent rep firms, including one in Canada. They have been a Rep for Aiphone for 16 years and represent six other manufacturing companies in the upstate New York area. This is Alby Currant Sales third time winning this distinguished award.

Access Hardware Supply Offers LCN®4040 Series



Access Hardware Supply currently stocks the 4040 Series from LCN® within its extensive product line. The redesigned 4040 Series is currently available in a standard cover or a Designer Series metal cover.

One of the advantages of the 4040 Series is that the

installation time has been cut in half because of the peel and stick template, which eliminates measuring and assures quick and accurate mounting. A Fast Adjust Dial™ (Fast Accurate Spring Tension) enables installers to precisely adjust the closer to match the conditions of the entrance. This most recent feature is activated when the spring power is adjusted. Once that occurs, the size appears on the face of the Dial, which is meant to expedite installation time as well as reduce maintenance.

Yale Rep Agency Appointment

Yale Security Group is proud to announce the appointment of DDA Architectural Consultants, Inc., as their new sales agency covering the Southern Florida market. Agency Principal, Dan Ozycz and his team have over 50 combined years of experience in the door and hardware industry. Their main office is based in Lake Worth, with sales associates Bill Williamson and Hugh Williamson covering offices in Tampa and Wilton Manors, Florida.

For more information, contact: Call: (561) 964-4660; Email: ddaac@bellsouth.net

The 212iLM™ Mullion Keypad

The newest product recently added to the Access Hardware Supply inventory is the Door-Guard™212iLM Mullion Keypad from IEI™. The 212iLM Mullion Keypad combines two very important elements - attractive designs and durability. The backlit keys make it a suitable commodity for indoor or outdoor applications and will demonstrate superior sturdiness in any environment. The illuminated, hardened keypad operates on a 12 to 24

volt AC or DC power.

A212iLM Mullion Keypad offers an easy-to-install, one-piece design, which mounts directly to mullion doorframes or any flat surfaces that does not require a back box. For ease of installation, there is a separate doorbell key and relay included with the keypad, which allows for up to 120 users.

Unique Trine Web Site Now Operational



The Trine Access Technology web site has been designed to provide fast, easy reference to the company's many products and services. It depicts Trine's complete line of electric strikes, signaling devices, transformers and other accessories, in an extremely user-friendly format. The viewer is taken, step-by-step, from the home page to the final product selection. Included are sales representative and distributor listings, a master cross reference product chart, printable catalog pages and templates, plus an array of carefully developed informational links and references. A timely and important newsletter "Stikelines" is also on the site.

For more information, call: (718) 829-2332; Fax: (718) 829-4605; E-mail: customerservice@trineonline.com



Solving Com Port Problems



by William C. Deutsch

You have just finished installing an access control system and connected a programmer to the COM port of your customer's computer. As you try to program the first credential, a dialog box with an ominous message like "Port not functioning" jumps to the screen.

"What's wrong?" the customer asks.

Here is a three-step process that will keep you from staring slack-jawed at the monitor, and empower you to solve most COM port related problems.

Your first step will usually be to swap in an identical "known good" device. If the new device works, you have just solved the problem. (Note: if you are going to run effective service calls, you need to keep a reasonable supply of service parts on hand!)

If the problem persists, you need to take a closer look at that port.

The next step, then, is to find out if the serial port you are using really is a COM port. New techs often are stumped by thinking that serial ports and COM ports are the same things. They are not.

A serial port is simply a physical connection that allows a stream of data to enter or leave your computer. It becomes a COM port by setting the Input/Output (I/O) Range and the Interrupt Request (IRQ).

In Windows 95/98 you access those settings through the Device Manager. The fastest way in is to right click on the "My Computer" icon and select "Properties." Now click on the "Device Manager" tab and open the "Ports" icon. *Figure 1*, shows the Windows 95 Device Manager. Double-click on the COM port icon, select "Resources" and you will see the settings for the I/O Range and the IRQ. *Figure 2*, shows the COM 1 settings as they appear in Windows 95. Windows 2000 requires one extra mouse-click to access the "Device Manager". After you select "Properties" from "My Computer," you will click on the "Hardware Tab" and then select "Device Manager."

I/O ranges allow the CPU to communicate with the port. Just as your address tells the mailman which house to deliver bills to, the I/O "address" lets the CPU contact the COM port.

The interrupt request is like the little number you take at the deli. If you have one, you can talk to the man behind the counter. If not, you're out of luck. Similarly, the IRQ gives your port permission to "interrupt" the CPU and talk.

The table below shows the standard I/O Ranges and IRQs for COM ports. If the settings in your Device Manager do not match this table, change them.

Device	Input/Output Range	Interrupt Request
COM 1	03F8-03FF	04
COM 2	02F8-02FF	03
COM 3	03E8-03EF	04
COM 4	02E8-02EF	03

If the settings are correct, your problem may be a conflict - another device on your system that is trying to hog the same resources as your port. Look at the "Conflicting device list." If there is a device listed, uninstall it, or assign different resources.

It is possible to have one or more serial ports on the back of the

computer, but no COM ports in the Device Manager. In this case, the serial port may be disabled or not set up as a COM port. To fix this, you need to access your computer's CMOS Setup Menu.

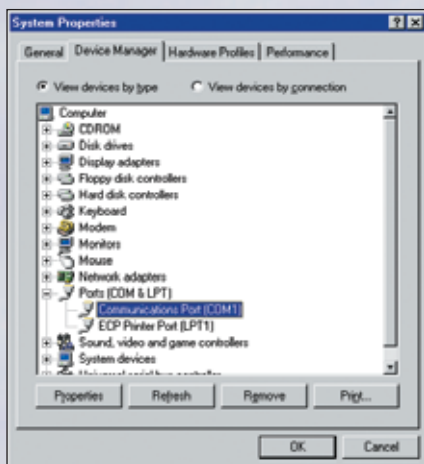
The setup menus from different manufactures vary, as do the methods of accessing them. Most likely, you will need to restart the computer. During the boot sequence, you will see a message like "Press DEL to enter setup." Once you are into the setup menu, you will be given different options. With what you have just learned about COM ports, you should be able to find your way around. Still, you should consult the computer's documentation before making any changes. Some things will be obvious. For instance, if you only have one serial port, and the setup menu says "Port One Disabled," that is the problem.

In summary then, here are three steps to follow when troubleshooting a COM port:

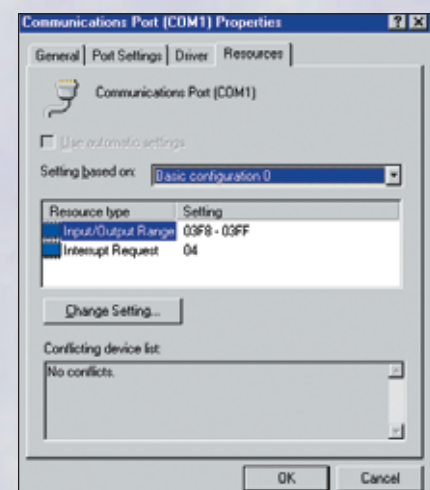
1. Install an identical "known good" device.
2. Verify the resources.
3. Verify the CMOS settings.

Following these basic steps should rescue you from the majority of COM port related problems.

This article originally appeared in Security Products and Technology News.



1. The Windows 95 Device Manager screen.



2. The COM 1 settings.

The 1999 SUZUKI® Savage

by
John
Blankenship



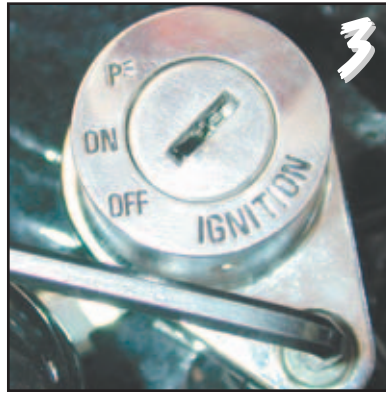
The Suzuki Savage is a lightweight and relatively inexpensive motorcycle with a 650cc single-cylinder engine. It is a fun bike to ride and there are a lot of them out there. It is easy to originate a key for this bike even though there are no codes on any of the locks.



The 1999 Suzuki Savage.

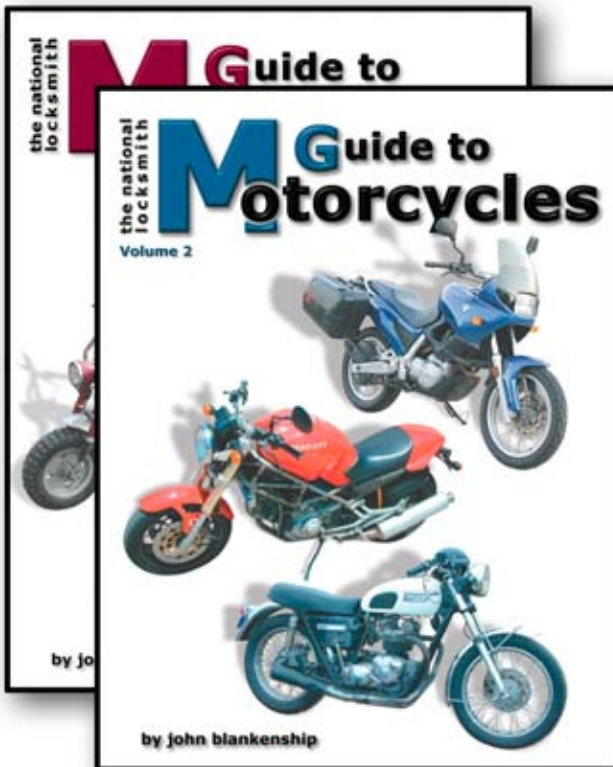
Ignition Lock

The ignition lock is located on the left side of the motorcycle, below the seat, and in front of the shock absorber. It is a good lock to make the key from because it is easily removed, quick to disassemble, no picking is necessary, and it contains all five wafer tumblers.



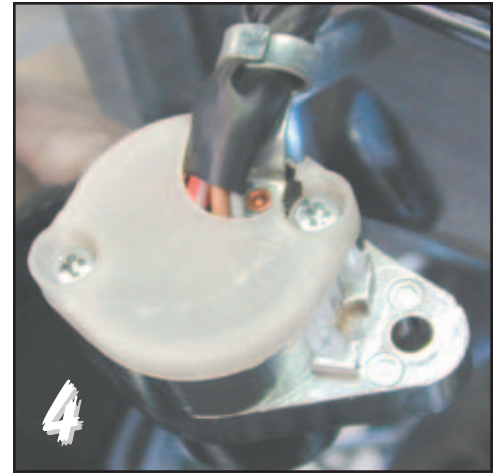
There are three positions for this lock: ignition off, ignition on, and park. The park position turns the ignition off and illuminates the taillight for emergency parking at night. Use a 4mm hex key to remove the one bolt that holds the lock on.

Guide to Motorcycles Vol. 1 & 2

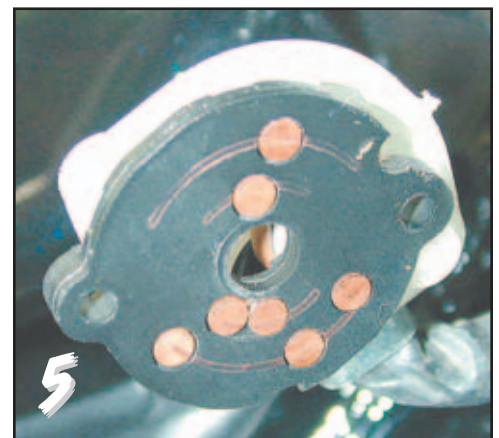


For years locksmiths have begged for a comprehensive service manual on motorcycles and its finally here!

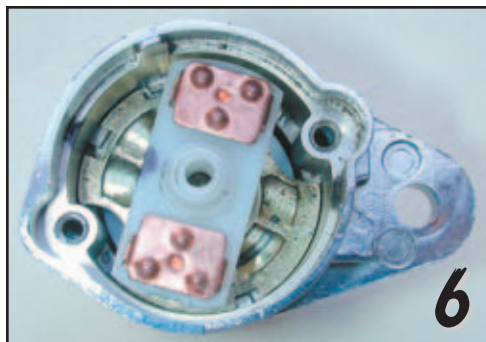
[CLICK HERE TO LEARN MORE](#)



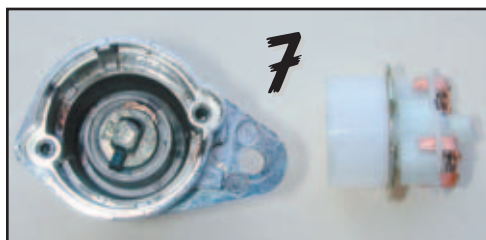
The electrical cable, attached to the back of the ignition lock, is long enough to allow you to pull the lock out far enough to work on it. Remove the two Phillips screws that hold the switch cover to the back of the lock.



Once the screws are removed, pull the lock down to separate it from the switch plate and cover. At least one of the contacts is energized with 12 volts, so make sure you do not allow them to touch any metal. It would not be a bad idea to disconnect the battery before performing this operation, but it is easy to avoid contact with metal, so I left it connected to save time.



With the lock removed, pull the tailpiece/switch out of the housing. I like to use a marking pen to insure that I replace things the same way they came off.



The tailpiece/switch has been removed and the wafer retainer is visible at the one o'clock position on the back of the plug. Depress it and push the plug out the front of the lock. Be careful not to allow any of the wafers to spring out.



Determine which of four possible blanks fits into the keyway. In this case it is a Curtis SU-12 (Ilco YH50). Insert the blank into the keyway and read the height of the five wafer tumblers. In this case, the depths are 23312.



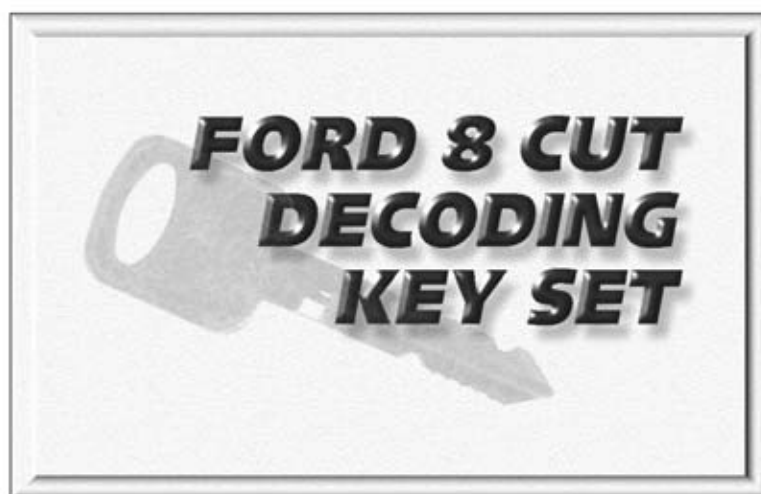
A Curtis SU-12 (Ilco YH50) with cuts of 23312 operates the ignition, helmet, gas cap, and toolbox locks. We know this is an E series code because a YH50 fits the lock. The code for this key is E39521.

Helmet Lock



The helmet lock is located on the right side of the motorcycle near the rear of the bike. It is a good lock to make a key from because it picks and removes easily.

Ford 8 Cut Decoding Key Set



Complete with 143 specially cut keys and simple directions. You get door and ignition keys within just a couple of minutes.

[CLICK HERE TO LEARN MORE](#)



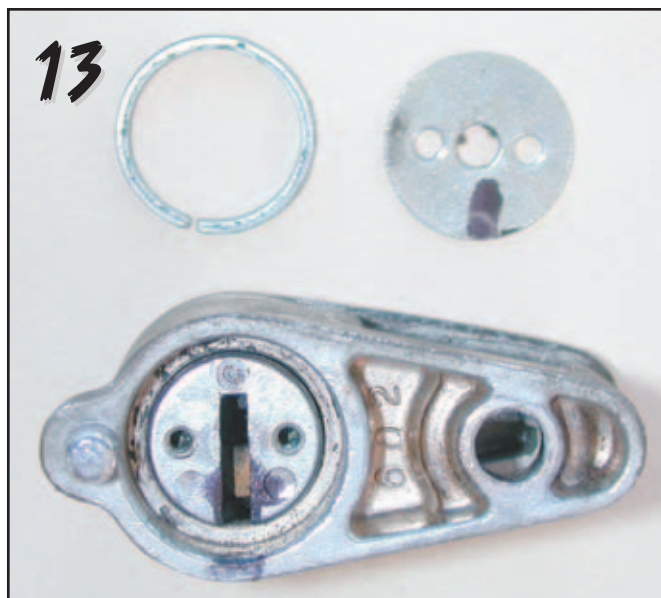
#FD - 8



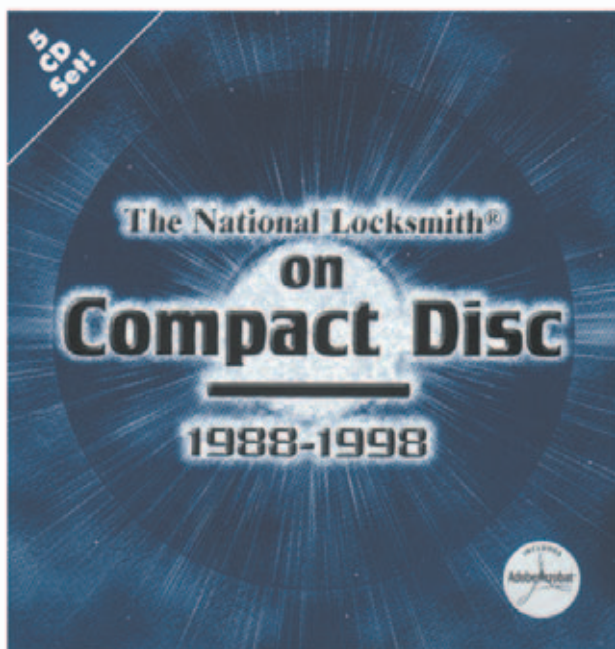
Pick the lock 45 degrees clockwise and you will be able to remove the Phillips screw that secures the lock to the frame. This lock was easy to pick using a rake.



Remove the two small Phillips screws from the retaining plate on the back of the helmet lock.



The retaining plate and then the bushing have been removed. The plug can now be pushed out the front of the lock. There is a small ball bearing detent that springs out from the front of the lock housing, so be careful it doesn't get lost. Also take care that the wafers do not fall out. The plug contains wafer tumblers in spaces 2 through 5. Insert a blank into the keyway and read the height of the tumblers. Put those cuts on the blank and make sure it turns the helmet lock smoothly. Then just progress the first cut in the ignition and/or gas cap until it turns smoothly and you have a working key.



TNL on CD

Our Compact Disc set features 11 years of the locksmith's favorite magazine. Thousands upon thousands of pages of indexed and searchable text!

[CLICK HERE TO LEARN MORE](#)

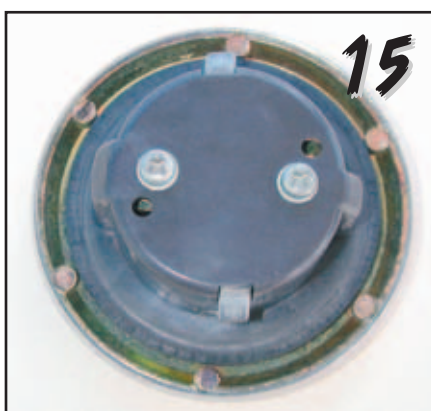


Gas Cap Lock

The gas cap is located on the top of the gas tank on the right side. It is another good lock to originate a key from. Pick the lock clockwise and remove the cap. It is usually easy to pick with a rake. Lubing will help if it is stubborn.



The locking bolt housing, along with the locking bolts and springs, have been removed and then the cover plate was removed. The tailpiece on the plug is now visible. Use a pair of pliers to pull it out. There is an O ring that resists being pulled out, but it does come out.



Remove the two Phillips screws on the back of the gas cap.



The tailpiece has been removed and you can now see the retainer on the upper side of the plug. Depress it and push the plug out the front of the lock. Be careful not to spill the wafers. The gas cap lock contains all five

wafer tumblers. Insert a blank into the keyway and read the height of the tumblers. Put these cuts onto the blank and you should have a key that works all the locks on the motorcycle.



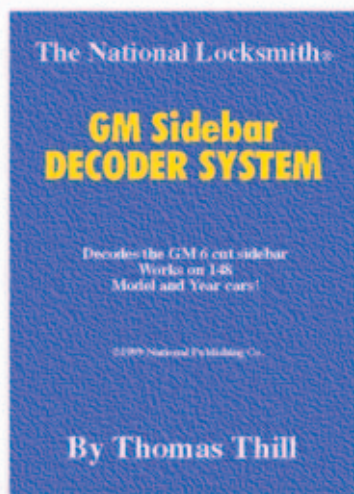
Key Manager

Designed both as a complimentary product for ProMaster and also as a stand alone product, this is a premium quality program, developed in accordance with industry standards and requirements for this type of software.

[CLICK HERE TO LEARN MORE](#)



GM Sidebar Lock Decoder System



Tom Thill, the author of a new book, has invented an amazing new way to make keys for six cut GM Sidebar Locks.

[CLICK HERE TO LEARN MORE](#)



#TT - 1

Tool Box Lock



The chrome toolbox is located on the right side of the motorcycle behind the engine. You can pick the lock clockwise and remove the chrome toolbox cover with the lock housing attached. The customer had to leave for work so I did not have time to disassemble the lock. It looked like it would be easy to disassemble the lock, once you remove it from the bike along with the toolbox cover.

Steering Lock

The Neiman steering lock uses a different key than the rest of the locks on the motorcycle. It is located on the right side of the motorcycle where the steering shaft passes through the frame. It is shown with the dust cover closed.



GM Steering Column Course



Comes complete with take-home test so you can become certified on GM steering column service! Authoritative training on every domestic GM column from 1967 to 1995.

[CLICK HERE TO LEARN MORE](#)



#GM - 2

Codes: C, D, E, & F 32010-79897

Blanks by Code Series:

C: Ilco: X117 (YH48), Curtis: SU10 (YM59), Silca: YH29R, Jet: YH48/50NP

D: Ilco: X118 (YH49), Curtis: SU11 (YM60), Silca: YH29, Jet: YH49/51-NP

E: Ilco: YH50, Curtis: SU12 (YM61), Silca: YH30R

F: Ilco: YH51, Curtis: SU13: (YM62), Silca: YH30

Spacing: 1=.157, 2=.256, 3=.354, 4=.453, 5=.551

Depths: 1=.295, 2=.276, 3=.256, 4=.236

Card Number: CMC80

ITL Number: 496

Curtis: DC-1 cam & SU-1B carriage

Tumbler Locations: 1 2 3 4 5

Ignition: x x x x x

Gas Cap: x x x x x

Helmet: x x x x

Suzuki Part Number: 51900-22662

Suzuki Part Name: Steering Lock Set

Price: \$30.41

Codes: BA11111-BA55555 direct read bow to tip.

Blank: Silca: NE44 or Ilco: SR61N (B69K), Curtis: MC44, Silca: NE5 or Ilco: Y61, Silca: NE31, NE62

Spacing: 1=.142, 2=.246, 3=.350, 4=.455, 5=.559

Depths: 5=.236, 4=.217, 3=.197, 2=.177, 1=.157

Card Number: MC10

ITL Number: 57

The number 0154 is stamped on the face of the steering lock. This same number is stamped on all of them and is not the code. This lock can be impressed, although it is not easy. The plug turns 45-degrees counterclockwise to unlock. You can also pick, shim, or drill the lock to remove it once the dust cover is removed. The dust cover is held on with a pin that is pressure fit into its hole. Use a screwdriver to pry the pin out and remove the dust cover. You will bend the cover some, but it is easily straightened by clamping it in a vice.



The steering lock is shown removed from the motorcycle. Turning the

plug 45 degrees counterclockwise aligns the locking pin behind the pin chamber housing on top of the lock. The whole lock can then be pulled out. If you need to drill and replace the ignition, you only have to drill 5/8" (16mm) deep. A broken bolt extractor works good to turn the plug so the lock can be removed. Under normal operation, the lock is unlocked and then pushed in so the tailpiece/bolt enters a hole in the steering shaft. The steering has to be turned to the left or right to align the hole in the steering shaft so the whole lock can be pushed in and then relocked. To unlock the steering, unlock the lock and allow the spring behind the lock to push it back out until it contacts the dust cover.

Note: A 5 depth is the shallowest cut and a 1 depth is the deepest cut. This is the same code info that is used for 1994 and earlier BMW motorcycles. **ITL**

How To Create Master Key Systems



Never has there been a more concise,
easier to understand program to
teach Master Keying.

CLICK HERE TO LEARN MORE



#HT - CMK1



THE CASH STATION

by Mark Daniel

LeFebure Square Door



Safe Manufacturer:

LeFebure

Safe Model #:

Square Door

UL Rating:

TL-15

Safe Size:

40" by 40"

Door Size: 38" by 38"

Handle Type: L Style

Handle Location:

13-3/4" down and 6-5/8" right of opening edge of door.

Handle Rotation:

Counter-Clockwise to open

Dial Center To Handle Center:

3-5/8" right of dial center.

Dial Location:

13-3/4" down and 3" right of opening edge.

Number of Door Locking Bolts:

3

Door Locking Bolt Locations:

7-3/8" – 17" – 26-1/2" down from top of door.

Door Locking Bolt Diameter:

3/4"

Door Thickness to Bolt Center:

2-3/4"

Door Thickness to Lock Case:

2-3/8"

Door Thickness to Back of Lock:

3-1/2"

Combination Lock Type:

LaGard 3330

Combination Lock UL Rating:

Group 2

Combination Lock Description:

3 wheel key change.

Combination Lock Case Thickness:

1-1/8"

Number of Wheels:

3

Driver Location:

Rear

Combination Lock Handing:

Vertical Down (VD)

Drop-In Location:

73

Forbidden Zone:

0 - 20

Combination Lock Opening Procedures:

4xL, 3xR, 2xL, 1xR to open.

Combination Lock Drill Point:

72 x 7/8" Align wheel gates at lever fence.

Combination Lock Relock Trigger Type:

Spring wire type.

Combination Relock Trigger Drill Point:

7/8" right of dial center and 1-5/8" down. Hook with a wire and pull towards front of safe.



LeFebure Square Door

Combination Lock Changing Procedures:

1. Dial the existing combination to the changing index.
2. Insert the proper change key and turn it left 1/4 turn.
3. Dial the new combination to changing index.
4. Turn the change key right 1/4 turn and remove it.
5. Test the new combination at the opening index.

External Relock Device Type:
Spring loaded pin.

External Relock Device Drill Point:

1-1/2" right of dial center and
2-3/4" down. Lift up with a shallow
hooked pin.

Time Lock Type:
Two Movement

Time Lock Snubber Bar Drill Point:

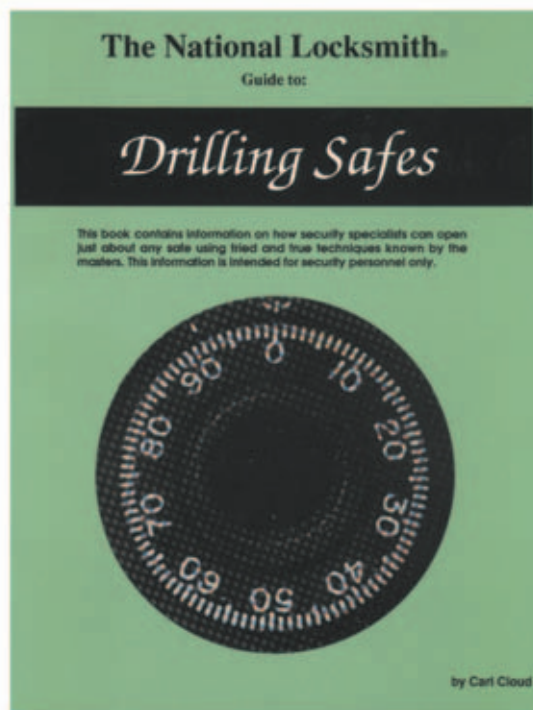
12-3/4" down from top of door and 8-1/2" right of opening edge. This is for the snubber bar pivot screw. If you want to drill the bar in half measure another 1/4" right.

Special Notes:

There is a ball bearing hard plate.

TNL

Drilling Safes



One of the most expert satemen in the country, Carl Cloud has written a very important book on safe opening.

[CLICK HERE TO LEARN MORE](#)



#DS - 1

TheNationalLocksmith.com

Technical forums, chat, online store, plus
visit our sponsors...

WEB REVIEW

Discount Safe Co., Inc.

<http://www.discountsafecoinc.com>

Located in Maple Shade, NJ, Discount Safe offers a variety of safe products to meet just about any need. The company offers in room security safes, through the wall depository safes, under the counter removable safes, drop boxes, depository safes, compact security safes, pistol safes, floor safes, high security composite safes and even padlocks.

Each category of safes includes a color image of the unit in question and suggested retail price. What's rather unique about Discount Safe's web site is that it not only has a customer section, there is also a locksmith section as well. The locksmith section includes the same merchandise and information, but also adds safe dimensions, weight and color. Locksmiths can also specify container lock type. Best of all, locksmith pricing is included so the locksmith can immediately see what his profit will be on each sale.

The company offers monthly specials and premiums through the web site.

The locksmith section is password protected. To gain access, call: 888-954-9004 for password information.



A&B Safe Corporation



www.a-bsafecorp.com

Abloy® DiskLock Pro



info@abloy.ca

Adesco Safe Manufacturing Co.



www.adesco.com

Aiphone



www.aiphone.com

DiMark International



www.dimarkinternational.com

Dynalock Corp.



www.dynalock.com

Framon Manufacturing Co.



www.framon.com

Herbert L. Flake Company



www.hflake.com

HPC, Inc.



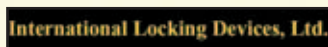
www.hpcworld.com

Indiana Cash Drawer Co.



www.icdpos.com

International Locking Devices, Ltd.



www.gatelock.com

Meilink



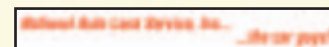
www.meilinksafe.com

Monaco Lock



www.monacolock.com

National Auto Lock Service, Inc.



www.laserkey.com

Omaha Wholesale Hardware



www.omahawh.com

ROFU International Corp.



www.rofu.com

SecuraKey



www.securakey.com

Security Resources, Inc.



www.techtrainproductions.com

ShatterGard Security Window Film



www.shattergard.com

Sieveking Products Co.



www.sievekingprodco.com

Tech-Train Productions



www.techtrainproductions.com

TekTone



www.tektone.net

Manufacturers and distributors... join the high profile locksmith web site and you'll be featured here!

Call Jeff Adair (ext. 15) or Debbie Schertzing (ext. 16) for details. (630) 837-2044

INL

**Taking
Industry Products
for a**

TEST DRIVE!

We've all benefited from his "Technitips" column in The National Locksmith. We recognize him as a pillar in our industry, and now we get to see a totally different side of him. Jake Jakubowski, has come out with a new lift-out floor safe book that is sure to turn some heads. His new book is entitled *The Fifteen Minute Safe Opening Technique* and is published by The National Locksmith.

FEATURES:

Jake has taken his many years of working with round-head, lift-out doors, and placed them into one easy to read and understand book. His new book is jam-packed with useful information such as five different ways to open a Major, four different ways to open a Star, and four different ways to open LaGard lift-out, round-head doors, just to mention a few. Each procedure is presented in explicit detail, leaving nothing to the imagination.

Each opening procedure has been beautifully documented and thoroughly examined. Some of the procedures presented are more difficult than others or preferred than others. The purpose of the book is to provide the reader with all opening options to assure success. Some require force, while others require finesse. The bottom line is, if you come face to face with one of the lift-out floor safes covered in this book that needs opening, you will be armed with the knowledge, tools and ability to accomplish the task at hand.

TOPICS COVERED:

To put the cherry on the sundae, The Fifteen Minute Safe Opening Technique book is much more than

how to open a locked lift-out floor safe. A variety of other topics are covered.

The book starts out covering a brief history of lift-out floor safes, then progresses on to what is the fifteen minute safe opening technique? Tools needed to complete all the procedures presented are covered and then the book gets in to the heart of the matter, covering openings for Major, Star, Pryor, In-A-Floor, Gary, Diebold, Protectall, Might-T-Safe, Kingdom, Sentry, and more. For many of the lift-out floor safes covered, there are more than one opening procedure offered.

The book then progresses on to what to do when all else fails, safe tips, opening tips, understanding the combination lock, lock operation and other useful bits of information.

BANG FOR THE BUCK:

The Fifteen Minute Safe Opening Technique book is 136 pages of useful information that clearly explains each opening procedure and is packed with excellent photographs.



The Fifteen Minute Safe Opening Technique

PRICE:

The suggested retail price for The Fifteen Minute Safe Opening Technique is \$99.00.

CONCLUSION:

At first glance some may think to themselves, "Oh, just another reference book for would-be safe tech's!" In actuality, this book has something for both beginners and veterans alike. For the new folks in the safe trade, you should get your feet wet with these safes and familiarize yourself with the opening principles. This is primarily because lift-out floor safes are some of the most commonly seen, and serviced safe containers you will encounter.

Any locksmith interested in safe work can use, and benefit from the methods taught in this book. There are few tools, or special tools needed to implement the techniques outlined in the book. Just the information outlined in the book, common sense, and some basic tools that every locksmith should already have in their arsenal is needed.

It's about time this information was printed and shared with the rest of the safe community. It is a long overdue book. In fact to my knowledge, it is the only book currently available that focuses exclusively on lift-out floor safes.

The information contained in the book is well researched and illustrated. The procedures are explained step-by-step, and have been used successfully used by many others in the field. If you don't benefit from the knowledge gained from this new book, you should be writing them yourself.

TNL

IN SUMMARY:

DESCRIPTION: Opening procedures for lift-out floor safes.

PRICE: \$99.00

COMMENTS: This book is long overdue.

TEST DRIVE RESULTS: The information is well researched, illustrated and presented and covered step-by-step.